TELEFUNKEN SERVICE

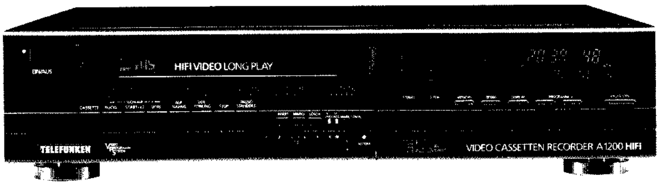
AUDIOVISION
AUDIOVISION
AUDIOVISUEL

S-VHS HiFi Videorecorder
A 1200/6000

Bestell-Nr. 319 492 906

Stromlaufpläne · Lagepläne
Service-Hinweise

Schematic Diagrams · Component
Layouts · Service Instructions



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Ausbauhinweise

1. Gehäuseoberteil

Die vier Schrauben (A) an den beiden Seiten und die Schraube (B) an der Rückseite entfernen.
Das Gehäuseoberteil etwas in Richtung ① bewegen und dann nach oben abheben.

2. Frontblende

Gehäuseoberteil entfernen.
Die drei Laschen (C) werden durch vorsichtiges Biegen nach oben vom Chassis entriegelt.
Die Frontblende in Richtung ② bewegen, um die drei unteren Laschen (D) vom Chassis zu entriegeln, dann die Frontblende abnehmen.

3. Bodenplatte

Gehäuseoberteil entfernen.
Die vier Schrauben (E) herausdrehen und die vier Gehäusefüße abnehmen.
Die drei Schrauben (F) herausdrehen und die Bodenplatte abnehmen.

4. Cassettenfach

Die zwei Befestigungsschrauben (G) der Videoplatte und die zwei Schrauben (H) aus dem Chassis herausdrehen.
Das Cassettenfach etwas nach vorn bewegen, um das Cassettenfach zu entriegeln.
Das Cassettenfach vorsichtig in Richtung ③ bewegen, den Stecker (K) abziehen und das Cassettenfach aus dem Chassis herausnehmen.

Disassembly

1. Top cover

Take out four screws (A) and one screw (B) from the right, left and rear sides of the set.
Tilt up the rear end of the top cover in direction ①, then remove the top cover.

2. Front panel

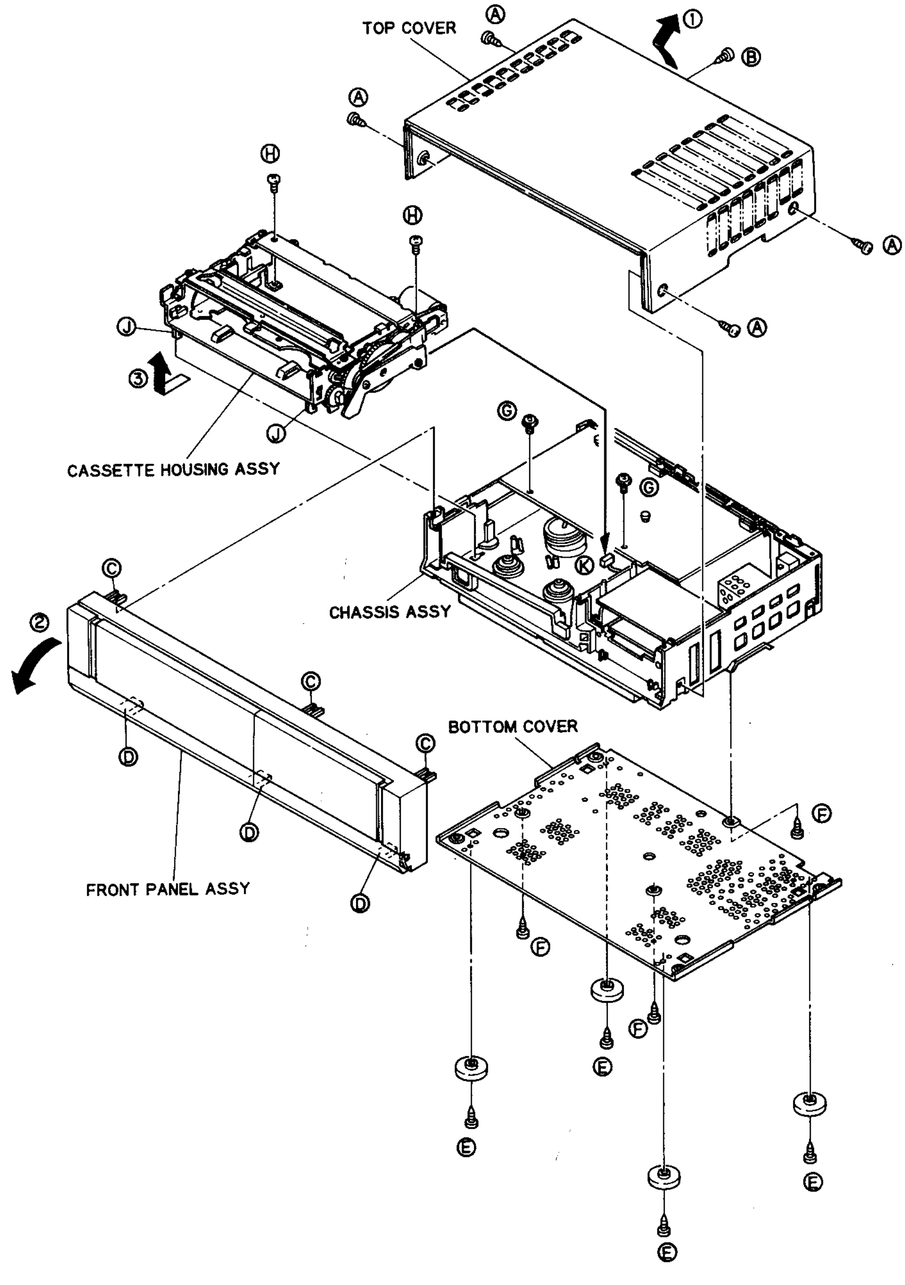
Remove the top cover.
Carefully bend three hooks (C) of the front panel from the upper side of the chassis in order to disengage the hooks from the chassis. Pull the front panel towards direction ② to disengage three hooks (D) of the front panel from the bottom of the chassis, then remove the front panel.

3. Bottom cover

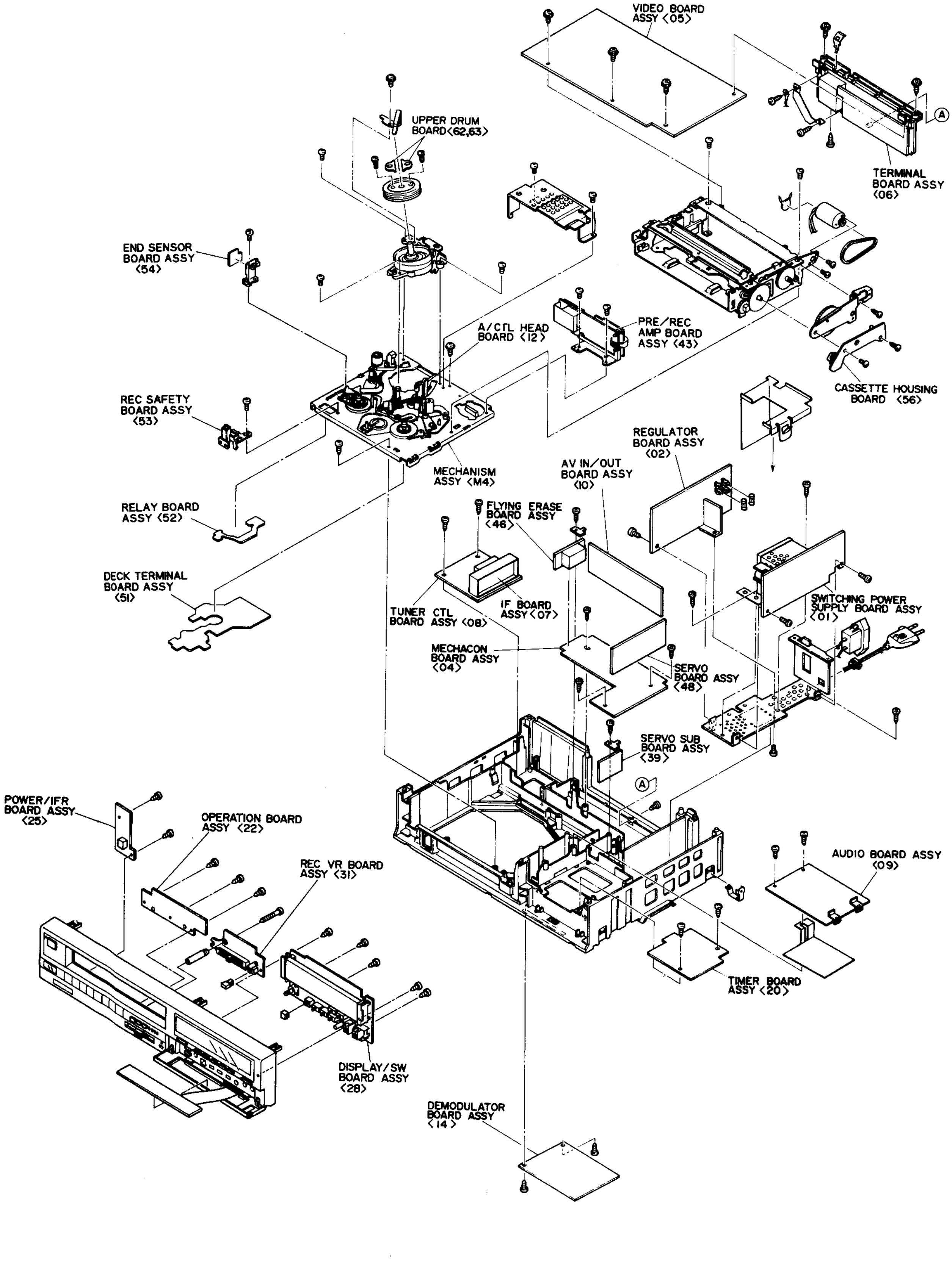
Remove the top cover.
Take out four screws (E) from the bottom of the set, then remove four feet.
Take out three screws (F) from the bottom of the set, then remove the bottom cover.

4. Cassette housing

Take out two screws (G) from the video board and take out two screws (H) from the chassis.
Pull the cassette housing toward front to disengage the two claws (J).
Carefully tilt up the cassette housing in direction ③ and disconnect connector (K), then remove the cassette housing.



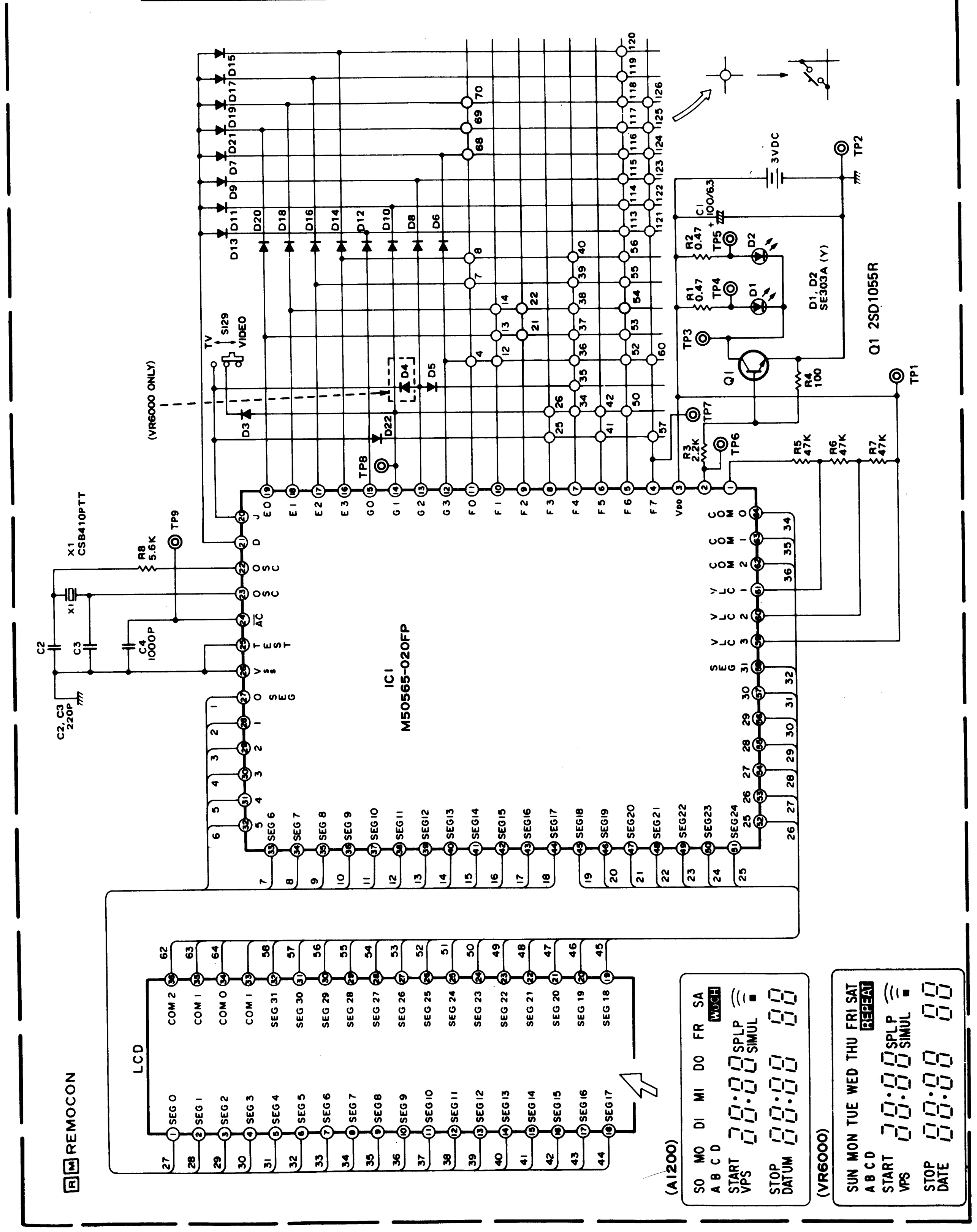
Lageplan der Leiterplatten
Circuit board locations


VIDEO BOARD ASSY <05>
UPPER DRUM BOARD<62,63>
Ⓐ
TERMINAL BOARD ASSY <06>
END SENSOR BOARD ASSY <54>
A/CTL HEAD BOARD <12>
PRE/REC AMP BOARD ASSY <43>
CASSETTE HOUSING BOARD <56>
REC SAFETY BOARD ASSY <53>
REGULATOR BOARD ASSY <02>
MECHANISM ASSY <M4>
AV IN/OUT BOARD ASSY <10>
RELAY BOARD ASSY <52>
FLYING ERASE BOARD ASSY <46>
DECK TERMINAL BOARD ASSY <51>
TUNER CTL BOARD ASSY <08>
IF BOARD ASSY <07>
SWITCHING POWER SUPPLY BOARD ASSY <01>
MECHACON BOARD ASSY <04>
SERVO BOARD ASSY <48>
SERVO SUB BOARD ASSY <39>
Ⓐ
POWER/IFR BOARD ASSY <25>
OPERATION BOARD ASSY <22>
REC VR BOARD ASSY <31>
AUDIO BOARD ASSY <09>
TIMER BOARD ASSY <20>
DISPLAY/SW BOARD ASSY <28>
DEMODULATOR BOARD ASSY <14>

Fernbedienung
Remote control

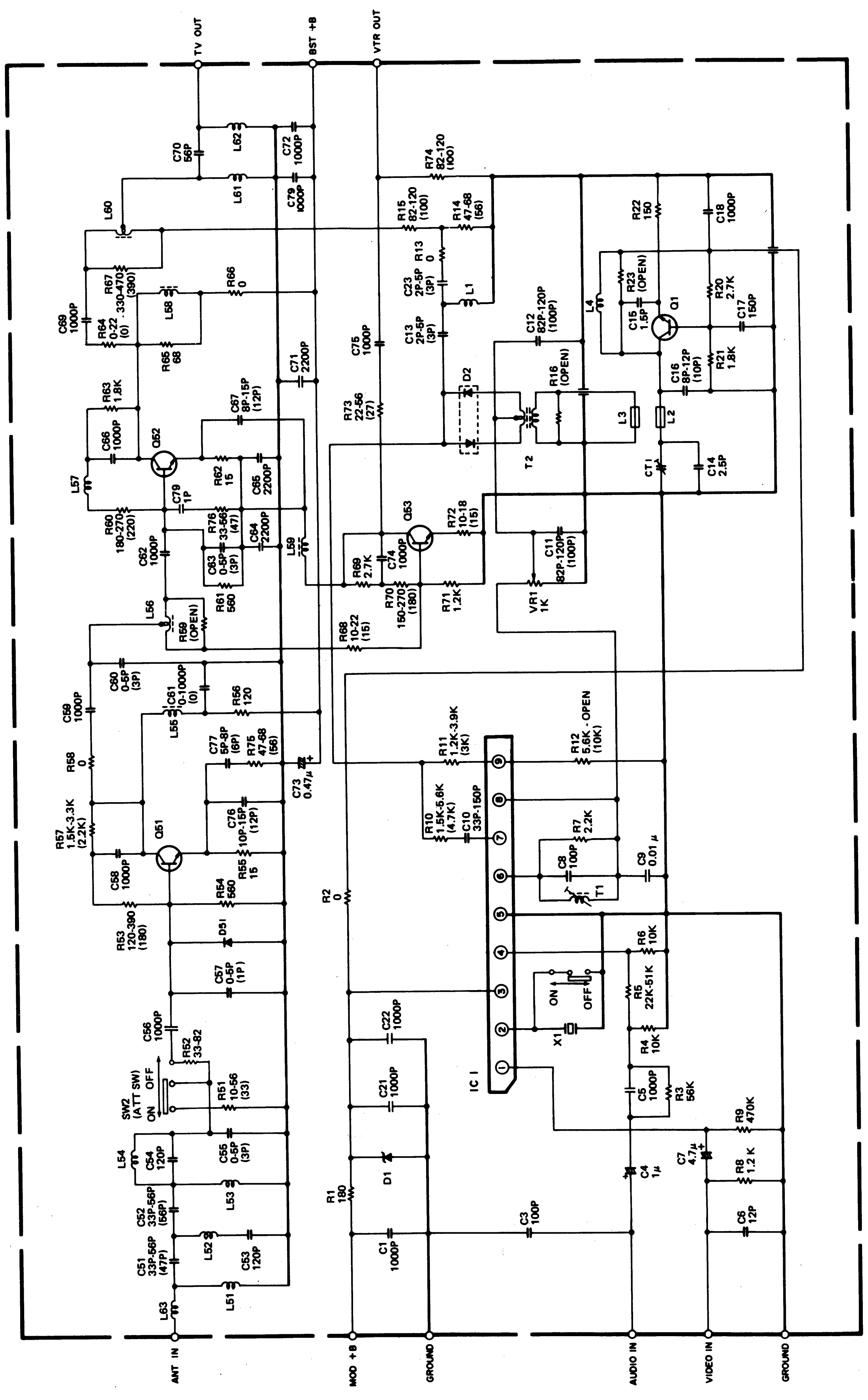
Notes: 1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference.
Avoid replacing individual parts.
Replace the entire unit only.

NO.	KEY NAME
4	STOP
7	FF
8	REW
12	OPERATE
13	PLAY
14	PAUSE/STILL
21	SLOW +
22	SLOW –
25	<CURS
26	>CURS
34	1
35	2
36	3
37	4
38	5
39	6
40	7
41	8/DIALY
42	9/REPEAT
50	SP/LP
52	O/AV
53	VPS/CH
54	TIMER
55	DIRECT CANCEL
56	DIRECT PROGR
57	DISPLAY
60	GO-TO
68	DIGITAL MEMORY
69	DIGITAL OFF
70	SOLARIZATION
113	COLOR +
114	COLOR –
115	MUTE
116	BRIGHT +
117	BRIGHT –
118	AV (TV)
119	VOL +
120	VOL –
121	OPERATE (TV)
122	⧓
123	REC
124	MEMO PROGR
125	MEMO CANCEL
126	TRANSFER

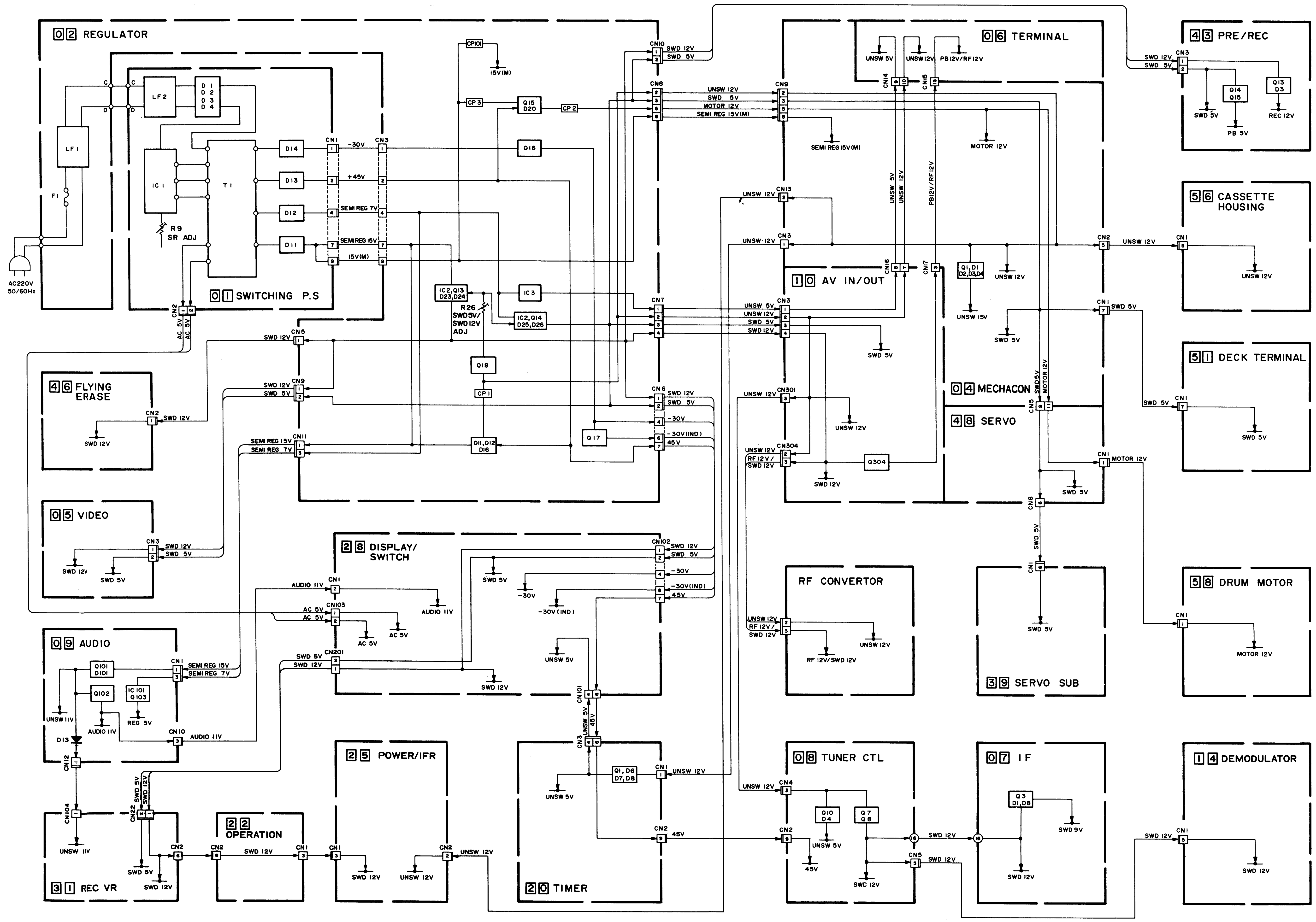

IC1 M50565-020FP
X1 CSB410PTT
R8 5.6K
TP9
C2, C3 220P
C4 1000P
Q1 2SD1055R
D1, D2 SE303A (Y)
C1 100/6.3
R1 0.47
R2 0.47
R3 2.2K
R4 100
R5 47K
R6 47K
R7 47K
3VDC
TV S129 VIDEO
(VR6000 ONLY)
LCD
REMOCON
(A1200)
SO MO DI MI DO FR SA
A B C D
START VPS
STOP DATUM
SPLP SIMUL
(VR6000)
SUN MON TUE WED THU FRI SAT
REPEAT
STOP DATE

HF-Konverter
RF converter

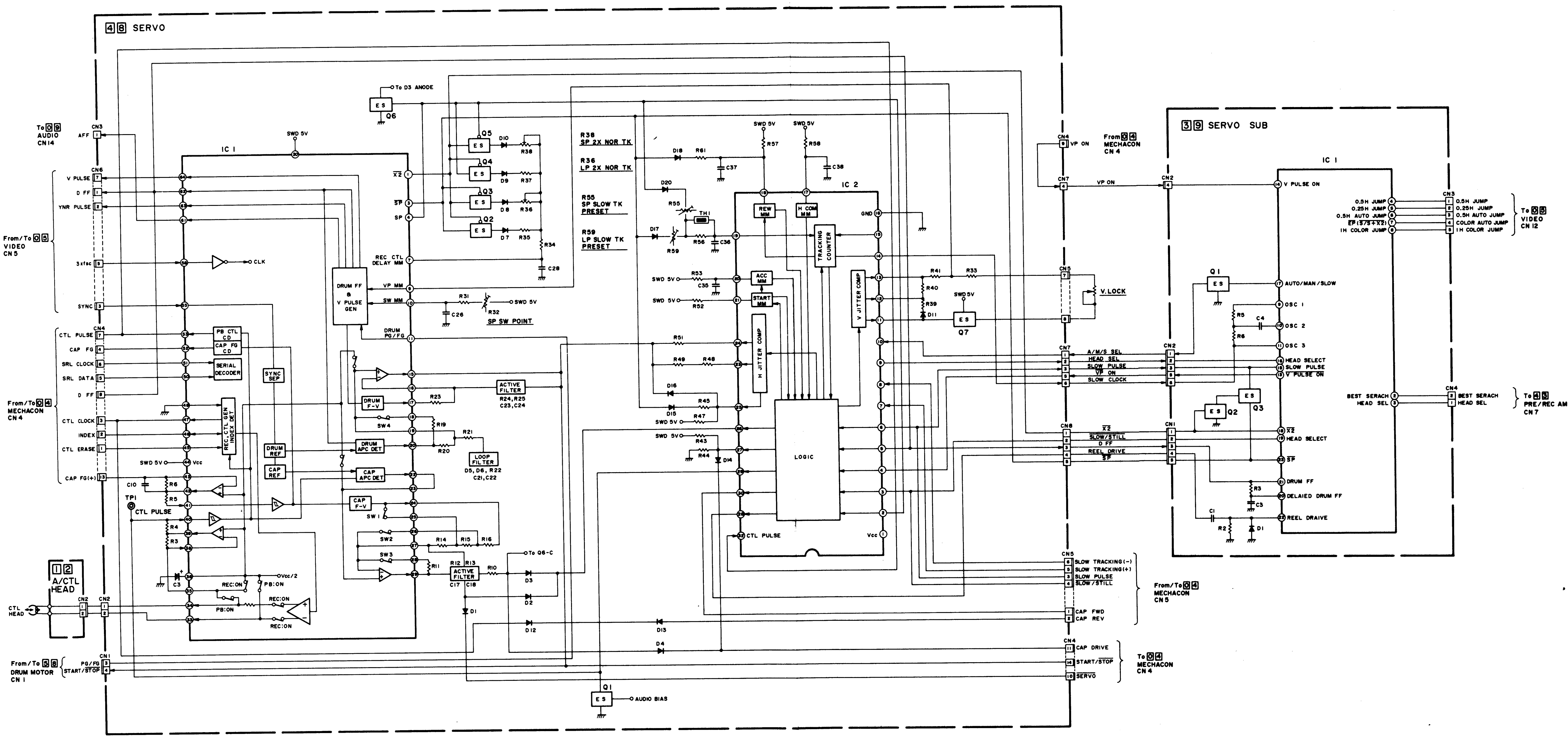
NOTES:
1. All parts slown in this schematic are critical for safety.
2. This schematic is only for reference.
Avoid replacing individual parts.
Replace the entire unit only.


TV OUT
BST +B
VTR OUT
ANT IN
MOD +B
GROUND
AUDIO IN
VIDEO IN
GROUND
IC 1
Q1
Q51
Q52
Q53
T1
T2
SW2 (ATT SW) ON OFF
VR1 1K
X1

Blockschaltbild Stromversorgung
Power system block diagram

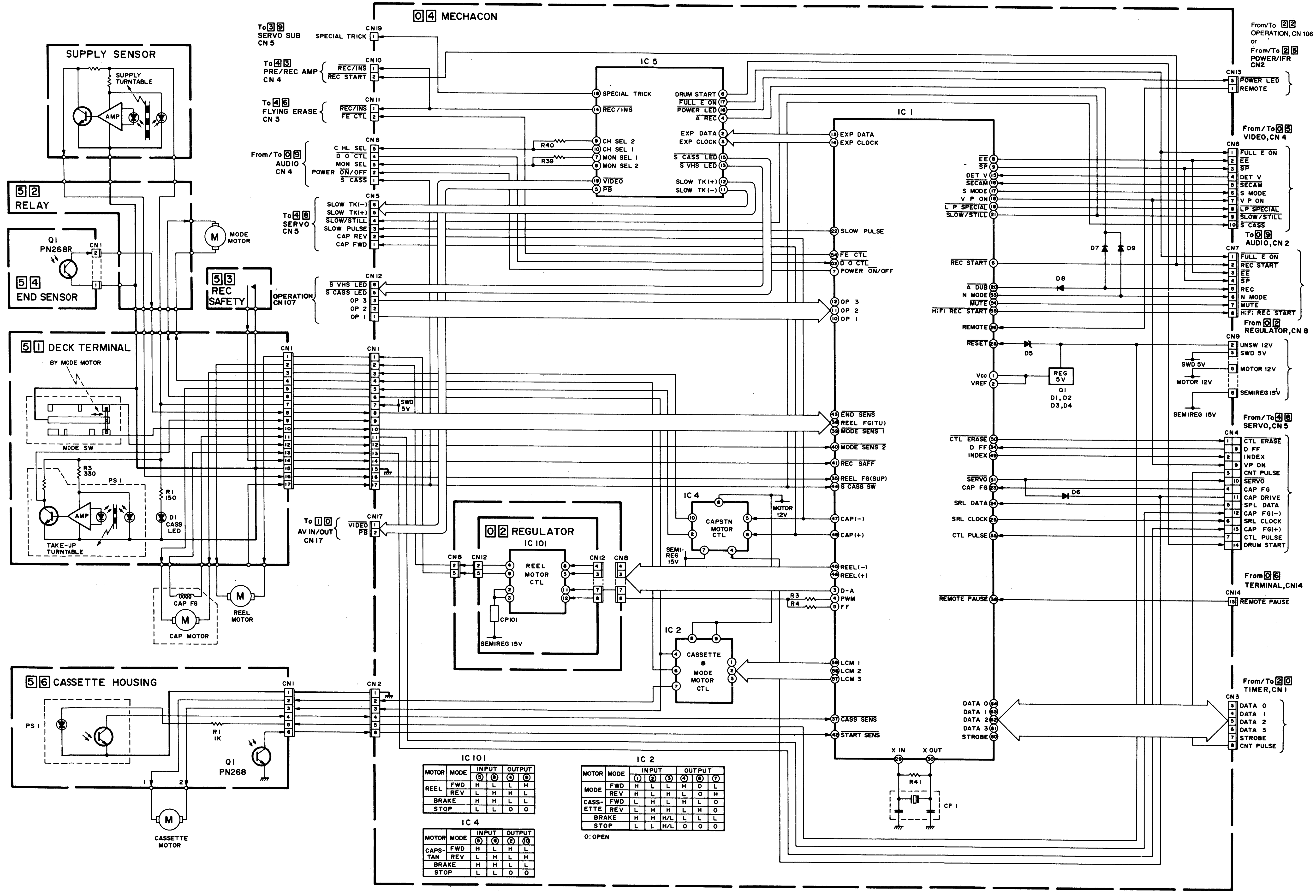

02 REGULATOR
LF1
LF2
D1 D2 D3 D4
F1
IC1
T1
R9 SR ADJ
AC220V 50/60Hz
D14
D13
D12
D11
CN1
CN3
-30V
+45V
SEMI REG 7V
SEMI REG 15V
15V(M)
01 SWITCHING P.S
CN2
AC 5V
CP101
15V(M)
CP3
Q15 D20
CP2
Q16
IC3
IC2,Q13 D23,D24
R26 SWD5V/ SWD12V ADJ
IC2,Q14 D25,D26
Q18
CP1
Q11,Q12 D16
Q17
CN5
CN9
CN11
CN10
CN8
CN7
CN6
SWD 12V
SWD 5V
UNSW 12V
MOTOR 12V
SEMI REG 15V(M)
UNSW 5V
-30V(IND)
45V
46 FLYING ERASE
05 VIDEO
09 AUDIO
Q101 D101
Q102
IC101 Q103
UNSW 11V
AUDIO 11V
REG 5V
D13
CN12
CN104
31 REC VR
CN22
28 DISPLAY/ SWITCH
CN102
CN103
CN201
AC 5V
22 OPERATION
25 POWER/IFR
20 TIMER
CN101
Q1, D6 D7, D8
06 TERMINAL
CN14
CN15
PB12V/RF12V
SEMI REG 15V(M)
CN13
CN16
CN17
10 AV IN/OUT
Q1, D1 D2,D3,D4
UNSW 15V
04 MECHACON
48 SERVO
CN301
CN304
RF 12V/ SWD 12V
Q304
43 PRE/REC
Q14 Q15
Q13 D3
PB 5V
REC 12V
56 CASSETTE HOUSING
51 DECK TERMINAL
58 DRUM MOTOR
RF CONVERTOR
RF 12V/SWD 12V
39 SERVO SUB
08 TUNER CTL
CN4
Q10 D4
Q7 Q8
07 IF
Q3 D1,D8
SWD 9V
14 DEMODULATOR

Servo Blockschaltbild
Servo block diagram



48 SERVO
39 SERVO SUB
IC 1
IC 2
To 09 AUDIO CN14
AFF
From/To 05 VIDEO CN5
V PULSE
D FF
YNR PULSE
3fsc
SYNC
CLK
From/To 04 MECHACON CN4
CTL PULSE
CAP FG
SRL CLOCK
SRL DATA
CTL CLOCK
INDEX
CTL ERASE
CAP FG(+)
SWD 5V
Vcc
PB CTL CD
CAP FG CD
SERIAL DECODER
REC,CTL GEN INDEX DET
SYNC SEP
DRUM REF
CAP REF
DRUM FF & V PULSE GEN
DRUM F-V
DRUM APC DET
CAP APC DET
CAP F-V
ACTIVE FILTER R24,R25 C23,C24
LOOP FILTER D5,D6,R22 C21,C22
ACTIVE FILTER
SW1
SW2
SW3
SW4
REC CTL DELAY MM
VP MM
SW MM
DRUM PG/FG
R31
R32
SP SW POINT
C26
To D3 ANODE
Q6
Q5
Q4
Q3
Q2
D10
D9
D8
D7
R38
R37
R36
R35
R34
C28
R38 SP 2X NOR TK
R36 LP 2X NOR TK
R55 SP SLOW TK PRESET
R59 LP SLOW TK PRESET
D18
R61
C37
D20
R55
TH1
D17
R59
R56
C36
R57
R58
C38
REW MM
H COM MM
TRACKING COUNTER
V JITTER COMP
H JITTER COMP
ACC MM
START MM
LOGIC
GND
R53
C35
R52
R51
R49
R48
D16
D15
R45
R47
R43
R44
D14
CTL PULSE
R41
R33
R40
R39
D11
Q7
V.LOCK
TP1
C10
R6
R5
R4
R3
C3
R19
R20
R21
R23
R11
R12
R13
R14
R15
R16
C17
C18
R10
To Q6-C
D3
D2
D1
D12
D13
D4
REC:ON
PB:ON
Vcc/2
A/CTL HEAD
CTL HEAD
From/To 58 DRUM MOTOR CN1
PG/FG
START/STOP
Q1
AUDIO BIAS
From 04 MECHACON CN4
VP ON
A/M/S SEL
HEAD SEL
SLOW PULSE
VP ON
SLOW CLOCK
X2
SLOW/STILL
D FF
REEL DRIVE
SP
SLOW TRACKING(-)
SLOW TRACKING(+)
SLOW PULSE
SLOW/STILL
CAP FWD
CAP REV
From/To 04 MECHACON CN5
CAP DRIVE
START/STOP
SERVO
To 04 MECHACON CN4
V PULSE ON
AUTO/MAN/SLOW
OSC 1
OSC 2
OSC 3
HEAD SELECT
SLOW PULSE
V PULSE ON
HEAD SELECT
DRUM FF
DELAIED DRUM FF
REEL DRAIVE
R5
C4
R6
R3
C3
C1
R2
D1
0.5H JUMP
0.25H JUMP
0.5H AUTO JUMP
EP(5/3+X2)
1H COLOR JUMP
COLOR AUTO JUMP
To 05 VIDEO CN12
BEST SERACH
HEAD SEL
To 45 PRE/REC AMP CN7
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8

Mechaniksteuerung Blockschaltbild
Mechanism control block diagram


04 MECHACON
SUPPLY SENSOR
SUPPLY TURNTABLE
AMP
52 RELAY
Q1 PN268R
CN1
54 END SENSOR
MODE MOTOR
53 REC SAFETY
51 DECK TERMINAL
BY MODE MOTOR
MODE SW
R3 330
PS1
R1 150
D1 CASS LED
TAKE-UP TURNTABLE
CAP FG
CAP MOTOR
REEL MOTOR
56 CASSETTE HOUSING
R1 1K
Q1 PN268
CASSETTE MOTOR
To 39 SERVO SUB CN 5
CN19 SPECIAL TRICK
To 43 PRE/REC AMP CN 4
CN10 REC/INS REC START
To 46 FLYING ERASE CN 3
CN11 REC/INS FE CTL
From/To 09 AUDIO CN 4
CN8 C HL SEL D O CTL MON SEL POWER ON/OFF S CASS
To 48 SERVO CN 5
CN5 SLOW TK(−) SLOW TK(+) SLOW/STILL SLOW PULSE CAP REV CAP FWD
OPERATION CN107
CN12 S VHS LED S CASS LED OP 3 OP 2 OP 1
To 10 AV IN/OUT CN 17
CN17 VIDEO PB
SWD 5V
IC 5
SPECIAL TRICK
REC/INS
CH SEL 2
CH SEL 1
MON SEL 1
MON SEL 2
VIDEO
PB
R40
R39
DRUM START
FULL E ON
POWER LED
A REC
EXP DATA
EXP CLOCK
S CASS LED
S VHS LED
SLOW TK(+)
SLOW TK(−)
IC 1
SLOW PULSE
FE CTL
D O CTL
POWER ON/OFF
OP 3 OP 2 OP 1
END SENS
REEL FG(TU)
MODE SENS 1
MODE SENS 2
REC SAFF
REEL FG(SUP)
S CASS SW
CAP(−)
CAP(+)
REEL(−)
REEL(+)
D-A
PWM
FF
R3
R4
LCM 1
LCM 2
LCM 3
CASS SENS
START SENS
X IN
X OUT
R41
CF1
EE
SP
DET V
SECAM
S MODE
V P ON
L P SPECIAL
SLOW/STILL
REC START
A DUB
N MODE
MUTE
HiFi REC START
REMOTE
RESET
D5
Vcc
VREF
REG 5V
Q1 D1, D2 D3, D4
D7
D9
D8
CTL ERASE
D FF
INDEX
SERVO
CAP FG
SRL DATA
SRL CLOCK
CTL PULSE
D6
REMOTE PAUSE
DATA 0 DATA 1 DATA 2 DATA 3 STROBE
IC 4
CAPSTN MOTOR CTL
MOTOR 12V
SEMI-REG 15V
02 REGULATOR
IC 101
REEL MOTOR CTL
CP101
SEMIREG 15V
CN8 CN12
IC 2
CASSETTE & MODE MOTOR CTL
CN2
From/To 22 OPERATION, CN 106 or From/To 25 POWER/IFR CN2
CN13 POWER LED REMOTE
From/To 05 VIDEO, CN 4
CN6 FULL E ON EE SP DET V SECAM S MODE V P ON LP SPECIAL SLOW/STILL S CASS
To 09 AUDIO, CN 2
CN7 FULL E ON REC START EE SP REC N MODE MUTE HiFi REC START
From 02 REGULATOR, CN 8
CN9 UNSW 12V SWD 5V MOTOR 12V SEMIREG 15V
SWD 5V
MOTOR 12V
SEMIREG 15V
From/To 48 SERVO, CN 5
CN4 CTL ERASE D FF INDEX VP ON CNT PULSE SERVO CAP FG CAP DRIVE SPL DATA CAP FG(−) SRL CLOCK CAP FG(+) CTL PULSE DRUM START
From 06 TERMINAL, CN14
CN14 REMOTE PAUSE
From/To 20 TIMER, CN 1
CN3 DATA 0 DATA 1 DATA 2 DATA 3 STROBE CNT PULSE

IC 101

MOTOR	MODE	INPUT ⑤	INPUT ⑧	OUTPUT ④	OUTPUT ⑨
REEL	FWD	H	L	L	H
	REV	L	H	H	L
BRAKE		H	H	L	L
STOP		L	L	O	O

IC 4

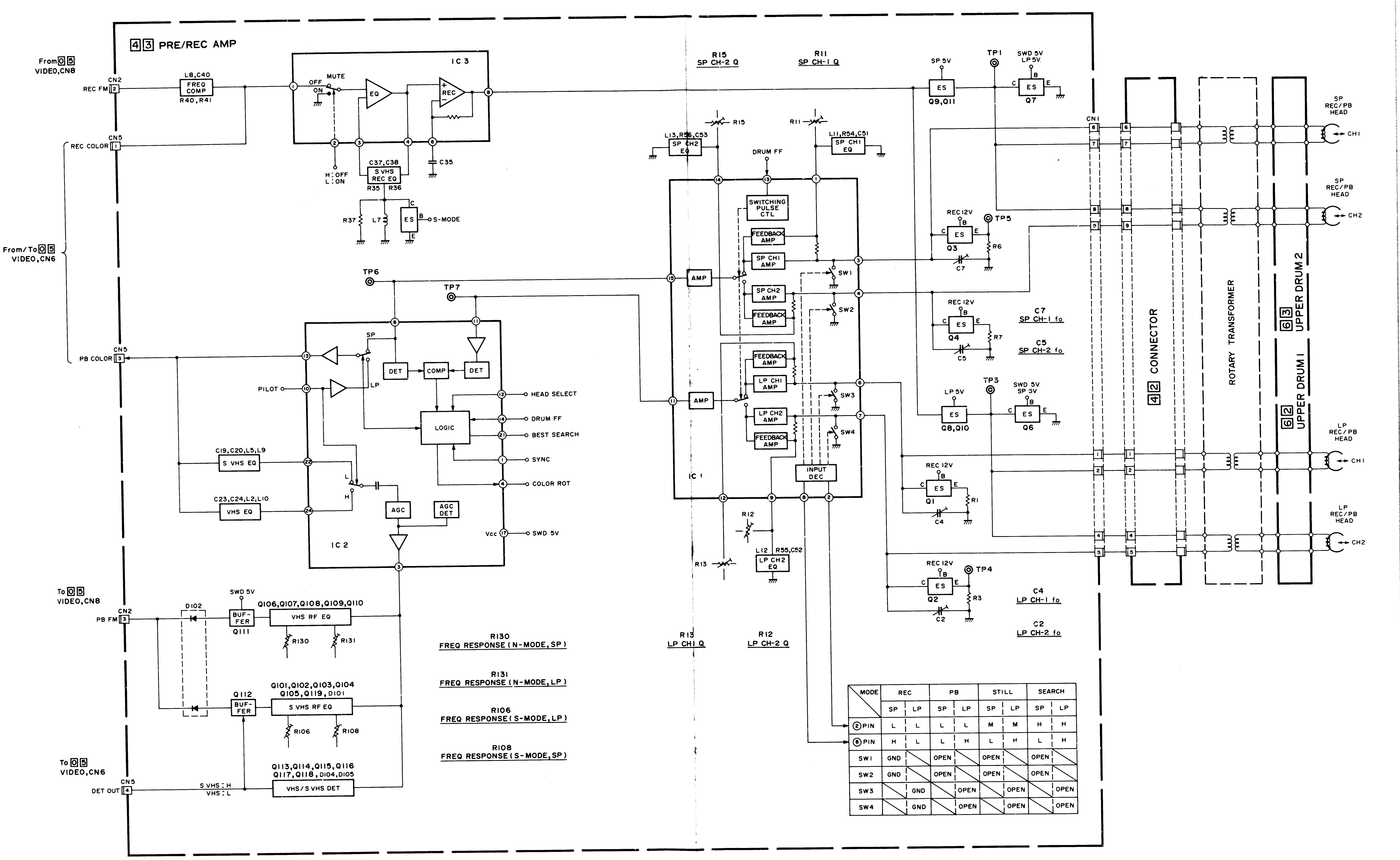
MOTOR	MODE	INPUT ⑤	INPUT ⑥	OUTPUT ②	OUTPUT ⑩
CAPS-TAN	FWD	H	L	H	L
	REV	L	H	L	H
BRAKE		H	H	L	L
STOP		L	L	O	O

IC 2

MOTOR	MODE	INPUT ①	INPUT ②	INPUT ③	OUTPUT ④	OUTPUT ⑥	OUTPUT ⑦
MODE	FWD	H	L	L	H	O	L
	REV	H	L	H	L	O	H
CASS-ETTE	FWD	L	H	L	H	L	O
	REV	L	H	H	L	H	O
BRAKE		H	H	H/L	L	L	L
STOP		L	L	H/L	O	O	O

O: OPEN

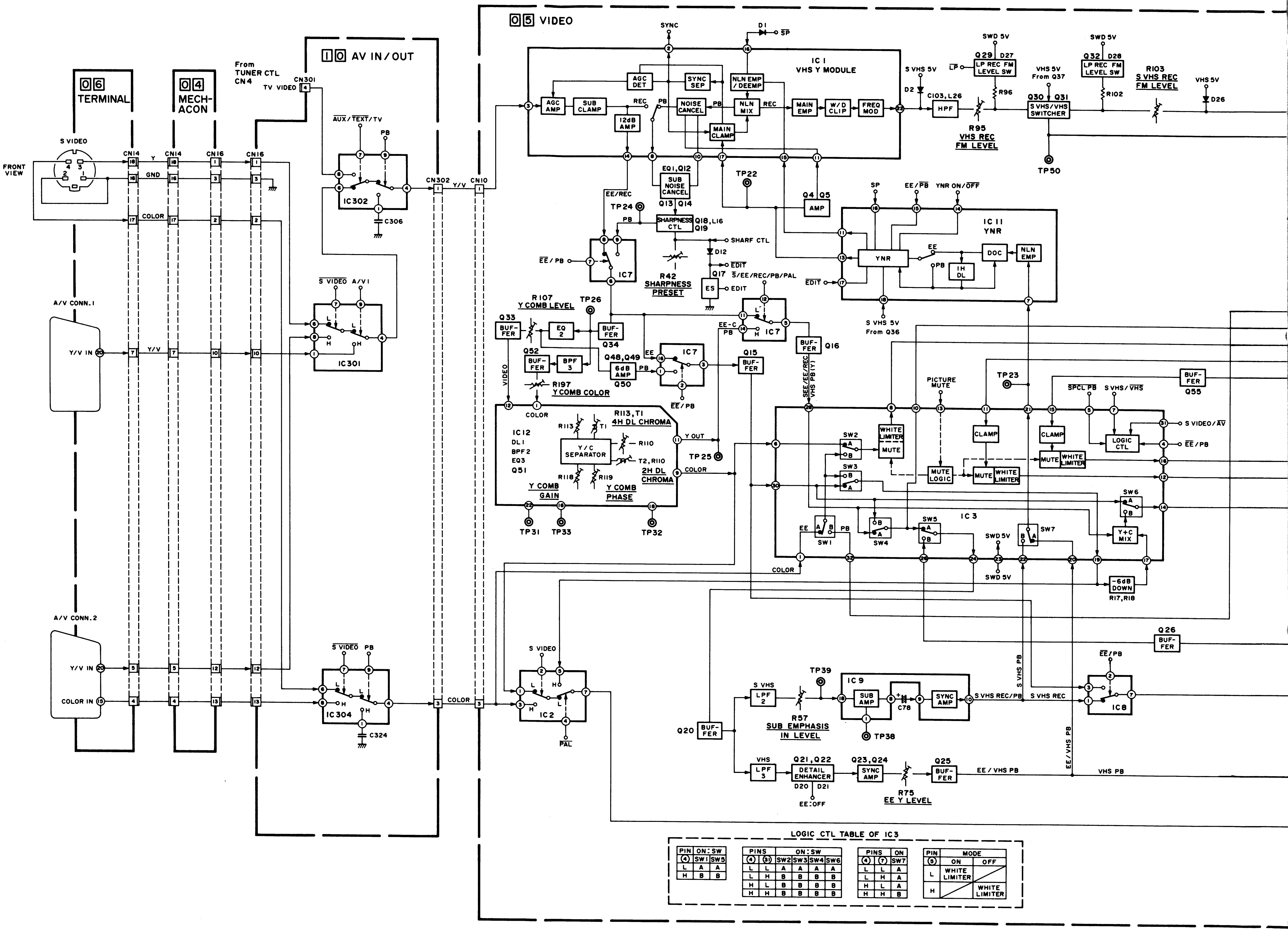
Aufnahme-/Wiedergabevorverstärker Blockschaltbild
Pre/Rec amplifier block diagram



43 PRE/REC AMP
From 05 VIDEO,CN8
CN2
REC FM 2
L8,C40
FREQ COMP
R40,R41
CN5
REC COLOR 1
From/To 05 VIDEO,CN6
IC3
MUTE
OFF
ON
EQ
REC
H : OFF
L : ON
C37,C38
S VHS REC EQ
R35 R36
C35
R37
L7
ES
S-MODE
TP6
TP7
SP
LP
DET
COMP
PILOT
HEAD SELECT
DRUM FF
BEST SEARCH
SYNC
COLOR ROT
LOGIC
AGC
AGC DET
Vcc
SWD 5V
IC2
CN5
PB COLOR 3
C19,C20,L5,L9
S VHS EQ
C23,C24,L2,L10
VHS EQ
To 05 VIDEO,CN8
CN2
PB FM 3
D102
SWD 5V
BUF-FER
Q111
Q106,Q107,Q108,Q109,Q110
VHS RF EQ
R130
R131
Q112
Q101,Q102,Q103,Q104
Q105,Q119,D101
S VHS RF EQ
R106
R108
To 05 VIDEO,CN6
CN5
DET OUT 4
S VHS : H
VHS : L
Q113,Q114,Q115,Q116
Q117,Q118,D104,D105
VHS/S VHS DET
R130
FREQ RESPONSE (N-MODE,SP)
R131
FREQ RESPONSE (N-MODE,LP)
R106
FREQ RESPONSE (S-MODE,LP)
R108
FREQ RESPONSE (S-MODE,SP)
R15
SP CH-2 Q
R11
SP CH-1 Q
L13,R56,C53
SP CH2 EQ
L11,R54,C51
SP CH1 EQ
DRUM FF
SWITCHING PULSE CTL
FEEDBACK AMP
SP CH1 AMP
SP CH2 AMP
LP CH1 AMP
LP CH2 AMP
AMP
SW1
SW2
SW3
SW4
INPUT DEC
IC1
R12
R13
L12 R55,C52
LP CH2 EQ
R13
LP CH1 Q
R12
LP CH-2 Q
SP 5V
TP1
SWD 5V
LP 5V
ES
Q9,Q11
Q7
REC 12V
TP5
Q3
R6
C7
Q4
R7
C5
C7
SP CH-1 fo
C5
SP CH-2 fo
TP3
LP 5V
SWD 5V
SP 5V
Q8,Q10
Q6
Q1
R1
C4
Q2
TP4
R3
C2
C4
LP CH-1 fo
C2
LP CH-2 fo
CN1
42 CONNECTOR
ROTARY TRANSFORMER
63 UPPER DRUM 2
62 UPPER DRUM 1
SP REC/PB HEAD
CH1
CH2
LP REC/PB HEAD

MODE	REC		PB		STILL		SEARCH	
	SP	LP	SP	LP	SP	LP	SP	LP
②PIN	L	L	L	L	M	M	H	H
⑧PIN	H	L	L	H	L	H	L	H
SW1	GND		OPEN		OPEN		OPEN	
SW2	GND		OPEN		OPEN		OPEN	
SW3		GND		OPEN		OPEN		OPEN
SW4		GND		OPEN		OPEN		OPEN

Video Blockschaltbild
Video block diagram


06 TERMINAL
04 MECH-ACON
10 AV IN/OUT
05 VIDEO
S VIDEO
FRONT VIEW
A/V CONN.1
A/V CONN.2
Y/V IN
COLOR IN
CN14
CN16
From TUNER CTL CN4
CN301
TV VIDEO
CN302
CN10
IC302
IC301
IC304
IC2
C306
C324
AUX/TEXT/TV
S VIDEO A/V I
S VIDEO PB
PAL
SYNC
D1
SP
IC1 VHS Y MODULE
AGC AMP
AGC DET
SUB CLAMP
SYNC SEP
NOISE CANCEL
NLN EMP / DEEMP
NLN MIX
MAIN CLAMP
MAIN EMP
W/D CLIP
FREQ MOD
12dB AMP
EQ1,Q12 SUB NOISE CANCEL
Q13 Q14
SHARPNESS CTL
Q18,L16 Q19
SHARF CTL
D12
EDIT
Q17 S/EE/REC/PB/PAL
ES
R42 SHARPNESS PRESET
TP22
TP24
Q4 Q5 AMP
S VHS 5V
LP
D2
C103,L26
HPF
Q29 D27 LP REC FM LEVEL SW
R96
R95 VHS REC FM LEVEL
VHS 5V From Q37
Q30 Q31 S VHS/VHS SWITCHER
TP50
Q32 D28 LP REC FM LEVEL SW
R102
R103 S VHS REC FM LEVEL
VHS 5V
D26
EE/PB
YNR ON/OFF
IC11 YNR
YNR
DOC
NLN EMP
1H DL
S VHS 5V From Q36
IC7
R107 Y COMB LEVEL
TP26
Q33 BUFFER
EQ 2
BUFFER Q34
Q52 BUFFER
BPF 3
Q48,Q49 6dB AMP Q50
R197 Y COMB COLOR
EE-C PB
Q15 BUFFER
BUFFER Q16
SEE/EE/REC VHS PB(Y)
VIDEO
COLOR
IC12 DL1 BPF2 EQ3 Q51
R113,T1 4H DL CHROMA
Y/C SEPARATOR
R110
T2,R110
2H DL CHROMA
Y COMB GAIN
Y COMB PHASE
Y OUT
TP25
TP31 TP33 TP32
PICTURE MUTE
TP23
SPCL PB
S VHS/VHS
BUFFER Q55
S VIDEO/AV
EE/PB
SW1 SW2 SW3 SW4 SW5 SW6 SW7
WHITE LIMITER
MUTE
CLAMP
MUTE LOGIC
LOGIC CTL
Y+C MIX
IC3
SWD 5V
-6dB DOWN R17,R18
Q26 BUFFER
S VHS PB
S VIDEO
S VHS LPF 2
R57 SUB EMPHASIS IN LEVEL
TP39
IC9 SUB AMP
C78
SYNC AMP
TP38
S VHS REC/PB
S VHS REC
IC8
Q20 BUFFER
VHS LPF 3
Q21,Q22 DETAIL ENHANCER
D20 D21
EE:OFF
Q23,Q24 SYNC AMP
R75 EE Y LEVEL
Q25 BUFFER
EE/VHS PB
VHS PB

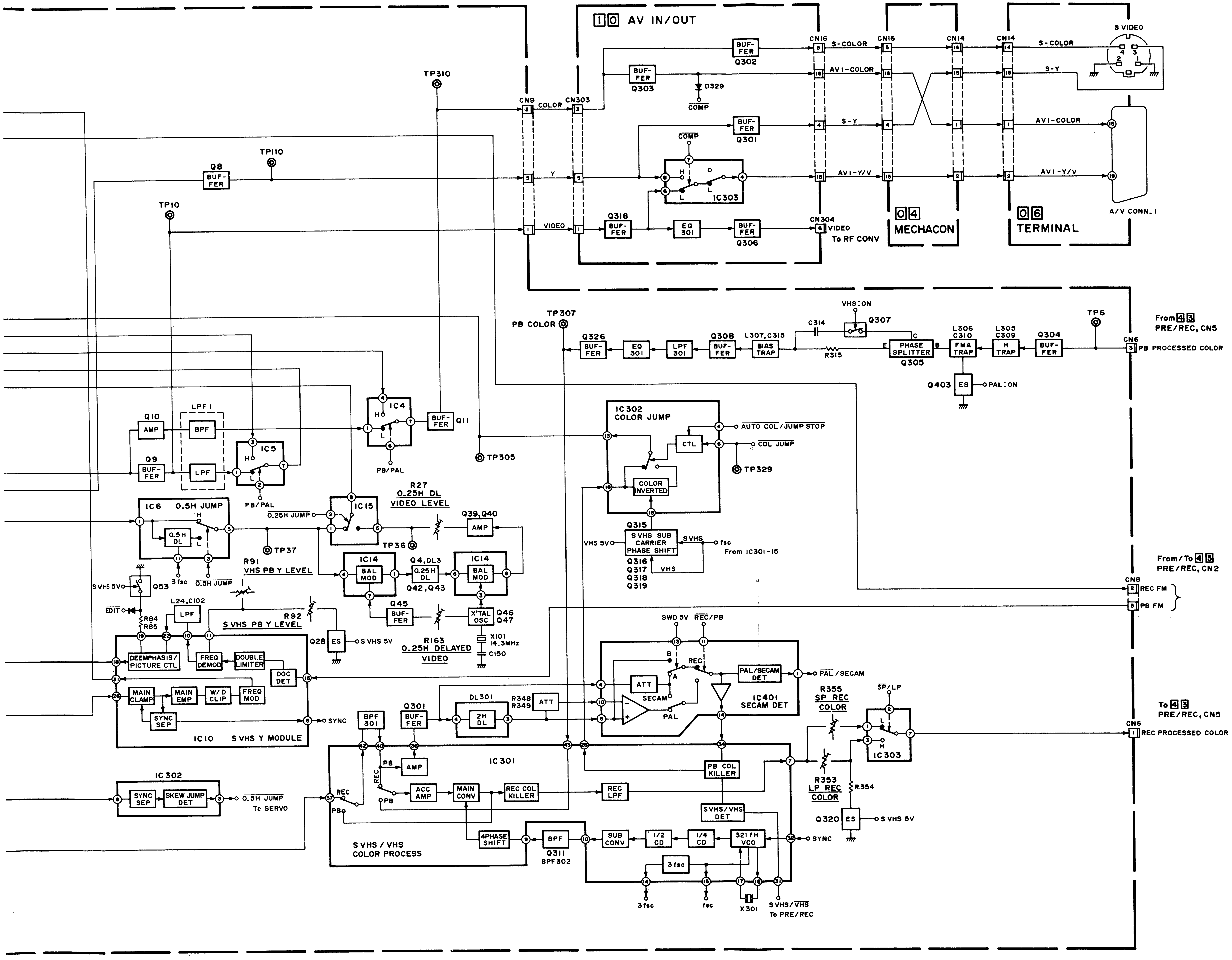
LOGIC CTL TABLE OF IC3

PIN	ON : SW	
④	SW1	SW5
L	A	A
H	B	B

PINS		ON : SW			
④	(31)	SW2	SW3	SW4	SW6
L	L	A	A	A	A
L	H	B	B	B	B
H	L	B	B	B	B
H	H	B	B	B	B

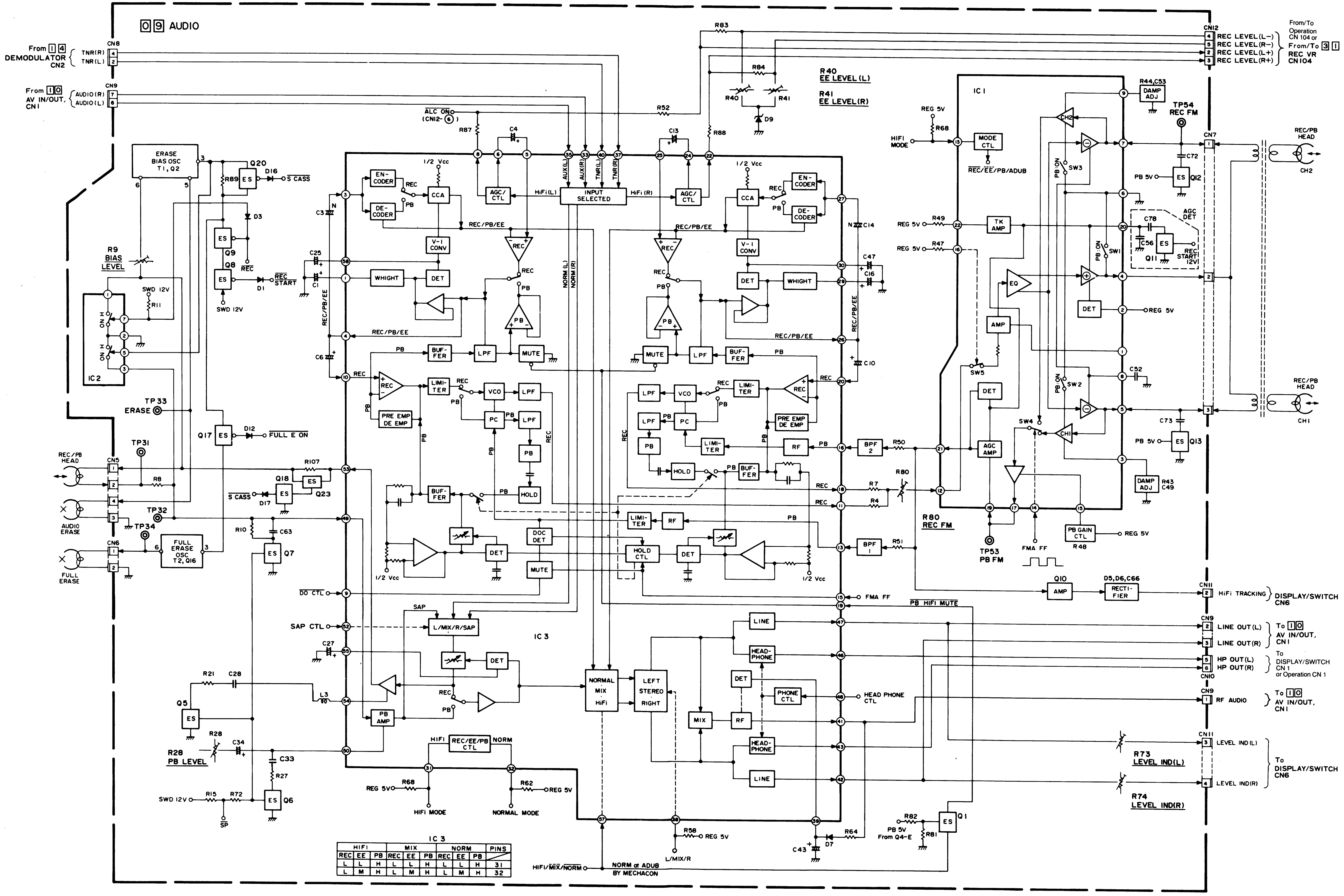
PINS		ON
④	⑦	SW7
L	L	A
L	H	A
H	L	A
H	H	B

PIN	MODE	
⑤	ON	OFF
L	WHITE LIMITER	
H		WHITE LIMITER



10 AV IN/OUT
04 MECHACON
06 TERMINAL
S VIDEO
A/V CONN. 1
CN9
CN303
CN16
CN14
CN304
S-COLOR
AV1-COLOR
S-Y
AV1-Y/V
COLOR
Y
VIDEO
BUF-FER Q302
BUF-FER Q303
BUF-FER Q301
D329
COMP
IC303
Q318 BUF-FER
EQ 301
BUF-FER Q306
VIDEO To RF CONV
TP310
TP110
TP10
Q8 BUF-FER
TP307
PB COLOR
Q326 BUF-FER
EQ 301
LPF 301
Q308 BUF-FER
L307,C315 BIAS TRAP
C314
VHS:ON
Q307
R315
PHASE SPLITTER Q305
L306 C310 FMA TRAP
L305 C309 H TRAP
Q304 BUF-FER
TP6
Q403 ES
PAL:ON
From 43 PRE/REC, CN5
CN6
PB PROCESSED COLOR
LPF1
Q10 AMP
BPF
Q9 BUF-FER
LPF
IC5
IC4
BUF-FER Q11
PB/PAL
TP305
IC302 COLOR JUMP
CTL
COLOR INVERTED
AUTO COL/JUMP STOP
COL JUMP
TP329
Q315 S VHS SUB CARRIER PHASE SHIFT
Q316 Q317 Q318 Q319
VHS 5V
S VHS
fsc From IC301-15
VHS
From/To 43 PRE/REC, CN2
CN8
REC FM
PB FM
IC6 0.5H JUMP
0.5H DL
3fsc
0.5H JUMP
0.25H JUMP
IC15
TP37
TP36
R27 0.25H DL VIDEO LEVEL
Q39,Q40 AMP
R91 VHS PB Y LEVEL
IC14 BAL MOD
Q4,DL3 0.25H DL Q42,Q43
IC14 BAL MOD
Q45 BUF-FER
X'TAL OSC Q46 Q47
X101 14.3MHz
C150
R163 0.25H DELAYED VIDEO
S VHS 5V
Q53
EDIT
R84 R85
L24,C102 LPF
R92 S VHS PB Y LEVEL
Q28 ES
S VHS 5V
DEEMPHASIS/PICTURE CTL
FREQ DEMOD
DOUBLE LIMITER
DOC DET
MAIN CLAMP
MAIN EMP
W/D CLIP
FREQ MOD
SYNC SEP
SYNC
IC10 S VHS Y MODULE
SWD 5V
REC/PB
ATT
SECAM
PAL
REC
PAL/SECAM DET
IC401 SECAM DET
PAL/SECAM
R355 SP REC COLOR
SP/LP
IC303
To 43 PRE/REC, CN5
REC PROCESSED COLOR
R353 LP REC COLOR
R354
Q320 ES
S VHS 5V
BPF 301
Q301 BUF-FER
DL301 2H DL
R348 R349
ATT
IC301
PB
AMP
ACC AMP
MAIN CONV
REC COL KILLER
REC LPF
PB COL KILLER
S VHS/VHS DET
4PHASE SHIFT
BPF Q311 BPF302
SUB CONV
1/2 CD
1/4 CD
321 fH VCO
3fsc
SYNC
S VHS / VHS COLOR PROCESS
3fsc
fsc
X301
S VHS/VHS To PRE/REC
IC302
SYNC SEP
SKEW JUMP DET
0.5H JUMP To SERVO

Audio Blockschaltbild
Audio block diagram

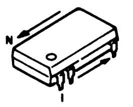
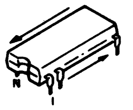
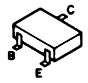
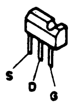
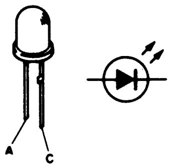
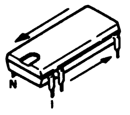
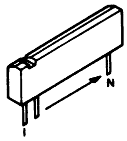
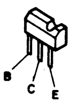
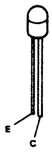
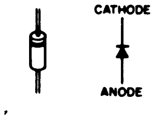
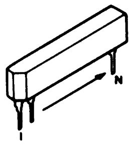
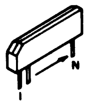
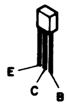
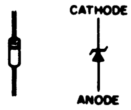
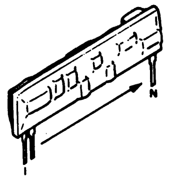
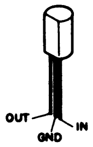
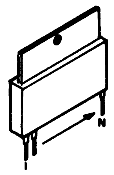
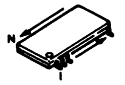


09 AUDIO
From 14 DEMODULATOR CN2
TNR(R)
TNR(L)
CN8
From 10 AV IN/OUT, CN1
AUDIO(R)
AUDIO(L)
CN9
ERASE BIAS OSC T1, Q2
Q20
R89
ES
D16
S CASS
D3
Q9
Q8
REC
REC START
D1
SWD 12V
R9 BIAS LEVEL
SWD 12V
R11
ON H
IC2
TP33 ERASE
TP31
Q17
D12
FULL E ON
REC/PB HEAD
CN5
R8
AUDIO ERASE
TP32
TP34
R107
Q18
Q23
S CASS
D17
R10
C63
Q7
CN6
FULL ERASE OSC T2, Q16
FULL ERASE
DO CTL
SAP CTL
C27
R21
C28
L3
Q5
R28
C34
C33
R27
R28 PB LEVEL
SWD 12V
R15
R72
SP
Q6
ALC ON (CN12-6)
R87
C4
AGC/CTL
HiFi(L)
INPUT SELECTED
HiFi(R)
AUX(L)
AUX(R)
TNR(L)
TNR(R)
EN-CODER
DE-CODER
CCA
1/2 Vcc
V-I CONV
DET
WHIGHT
REC/PB/EE
C3
C25
C1
C6
BUF-FER
LPF
MUTE
LIMI-TER
VCO
PC
PRE EMP DE EMP
HOLD
DOC DET
MUTE
HOLD CTL
NORM (L)
NORM (R)
SAP
L/MIX/R/SAP
IC 3
PB AMP
NORMAL MIX HiFi
LEFT STEREO RIGHT
LINE
HEAD-PHONE
PHONE CTL
MIX
RF
HIFI
REC/EE/PB CTL
NORM
R68
REG 5V
HIFI MODE
R62
NORMAL MODE
R58
L/MIX/R
HIFI/MIX/NORM
NORM at ADUB BY MECHACON
C43
D7
R64
R83
R84
R40
R41
D9
R52
R88
C13
R40 EE LEVEL (L)
R41 EE LEVEL (R)
C14
C47
C16
C10
BPF 2
R50
R80
R7
R4
BPF 1
R51
FMA FF
PB HIFI MUTE
HEAD PHONE CTL
IC1
REG 5V
R68
HIFI MODE
MODE CTL
REC/EE/PB/ADUB
R49
R47
TK AMP
EQ
AMP
SW5
DET
AGC AMP
SW4
CH1
CH2
SW3
SW1
SW2
PB ON
AGC DET
C78
C56
Q11
REC START 12V
DAMP ADJ
R44, C53
TP54 REC FM
C72
ES
Q12
PB 5V
C52
C73
Q13
DAMP ADJ
R43 C49
PB GAIN CTL
R48
TP53 PB FM
R80 REC FM
Q10
D5, D6, C66
RECTI-FIER
CN12
REC LEVEL(L-)
REC LEVEL(R-)
REC LEVEL(L+)
REC LEVEL(R+)
From/To Operation CN 104 or
From/To 31 REC VR CN104
CN7
REC/PB HEAD
CH2
CH1
CN11
HiFi TRACKING
DISPLAY/SWITCH CN6
LINE OUT(L)
LINE OUT(R)
To 10 AV IN/OUT, CN1
HP OUT(L)
HP OUT(R)
To DISPLAY/SWITCH CN1 or Operation CN 1
CN10
RF AUDIO
LEVEL IND(L)
LEVEL IND(R)
R73 LEVEL IND(L)
R74 LEVEL IND(R)
To DISPLAY/SWITCH CN6
R82
R81
PB 5V From Q4-E
Q1

IC 3

HIFI			MIX			NORM			PINS
REC	EE	PB	REC	EE	PB	REC	EE	PB	
L	L	H	L	L	H	L	L	H	31
L	M	H	L	M	H	L	M	H	32

Halbleiter-Übersicht und Sockelschaltungen
Main types of active and package circuits

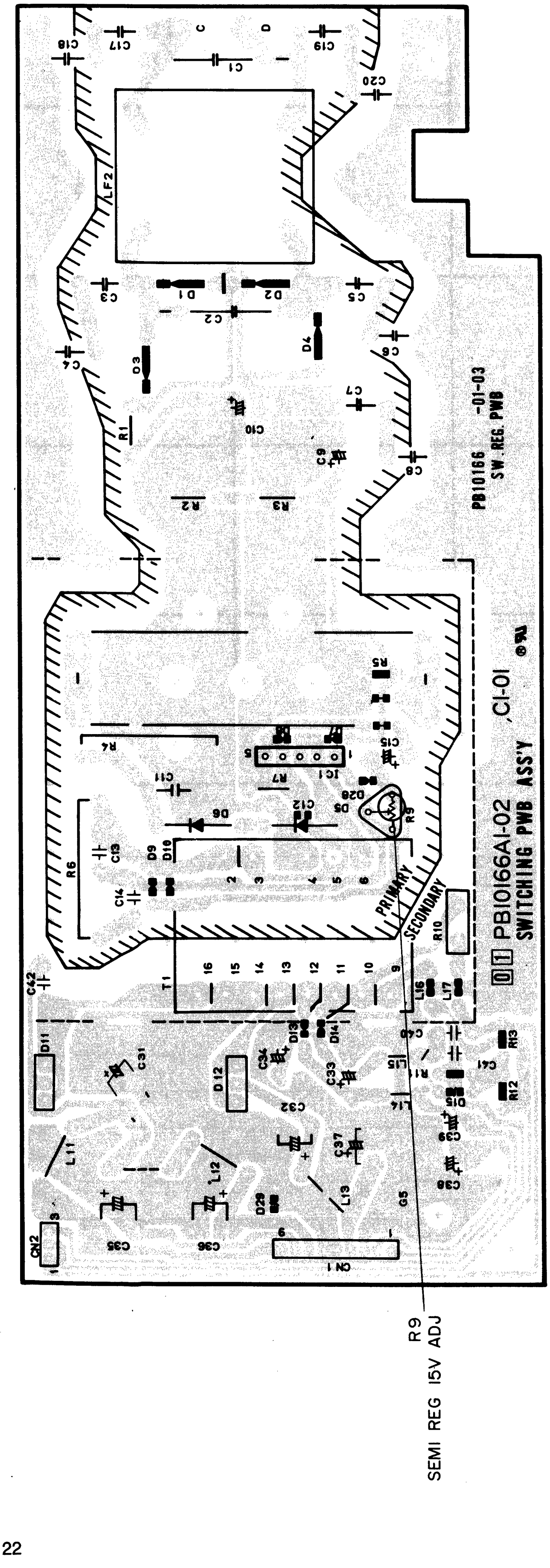
	Integrated Circuit		**Transistor**		**Diode**
	A	**B**	**C**	**D**	**E**
1					
2					
3					
4					
5					

NAME		L
IC		
A	AN6041	3A
B	BA10324	2A
	BA716LS	2B
	BU3791	2A
H	HZ118070	1A
	HD49722NT	1A
M	MC7805ACT	5A
	MSC1148BRS	2A
	MSM16811RS	1A
	M50445-398SP	1B
	M50938-625SP	2A
	M51288SP	1A
	M52055P	2A
N	NJM2233AD	1A
	NJM2234D	1A
	NJM2234S	3B
	NJM2243S	3B
P	PB20167A-01	4A
	PB20285A	4A
	PB20286A-01	4A
	PB20287A-02	4A
	PB20289A-02	4A
	PB20290A-02	4A
	PB20291A	4A
	PB20298A	4A

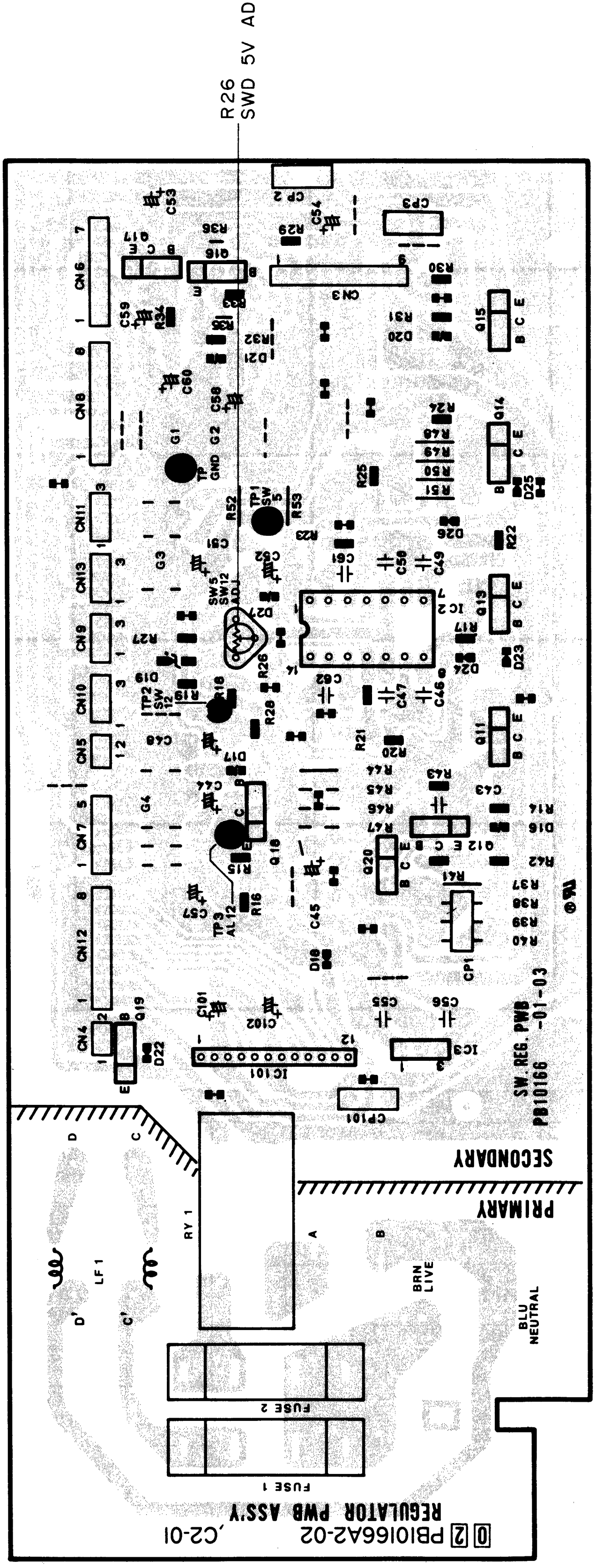
NAME		L
S	SDA5642	2A
	STR-D1706	5A
	S-8053HNB	4B
T	TA8405S	3B
	TA8609P	1B
	TA8733F	5B
	TC4052BP	1B
	TC74HC04AP	1A
	TC74HC4066P	1B
U	UPD75216ACW-188	1B
V	VC2063S	2A
TRANSISTOR		
DTC	DTC124EK	1C
P	PN268R-NC	2D
U	UN4319VI	3C
2SA	2SA1036K	1C
2SC	2SC1740	3C
	2SC2647	2C
	2SC3311A	3C
	2SC3313CTA	3C

NAME		L
2SD	2SD639R	2C
2SK	2SK658	1D
DIODE		
H	HZ12A2	3E
	HZ6BITE	3E
M	MTZJ4.7C	3E
O	OA90UF	2E
R	RD16ES-T1B2	3E
	RD20ES-T1B2	3E
S	SLR-55VC3F	1E
1	10E6-F2	2E

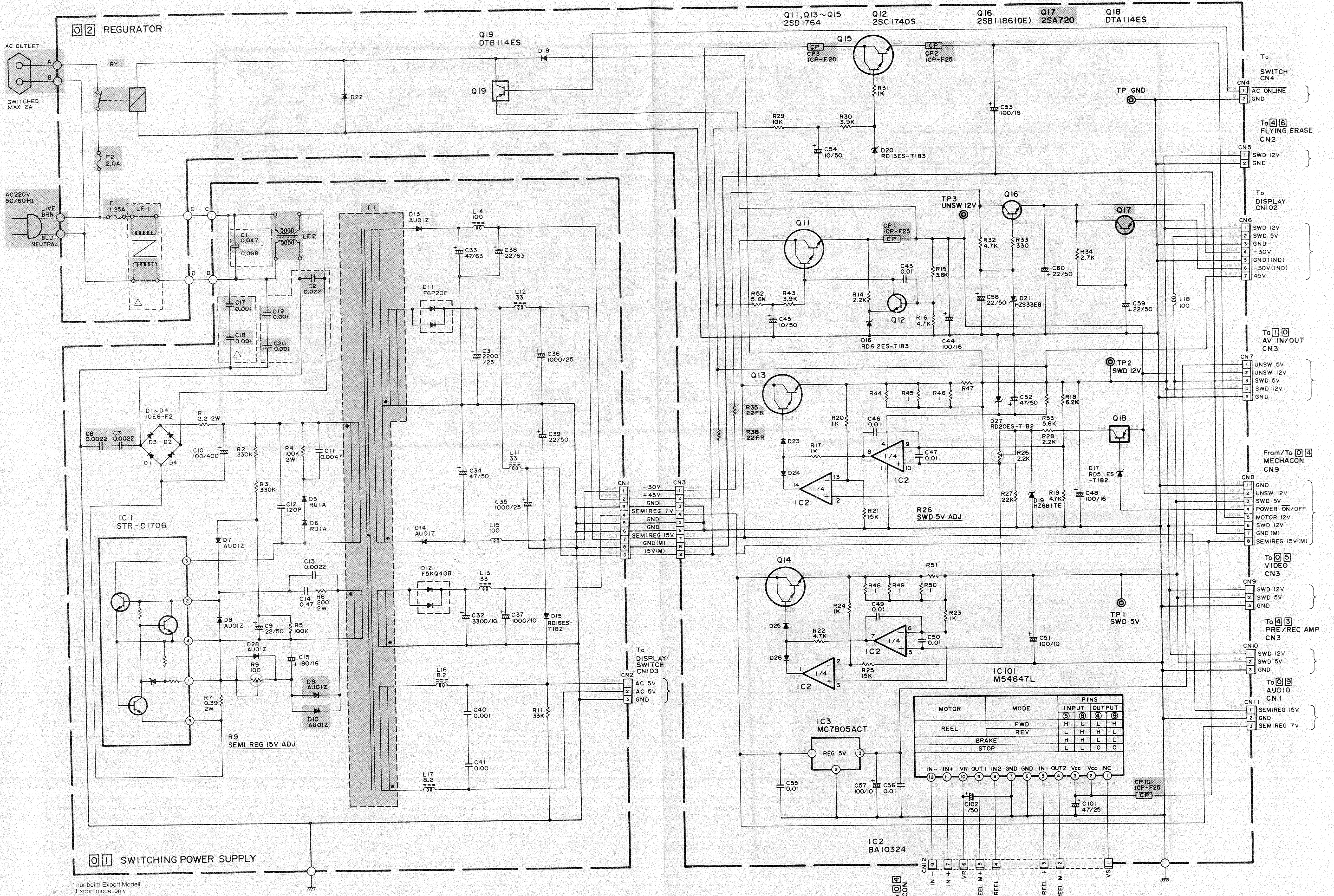
Schaltnetzteilplatte
Switching power supply board


PB10166A1-02 ,CI-01
SWITCHING PWB ASS'Y
PB10166 -01-03
SW. REG. PWB
PRIMARY
SECONDARY
T1
IC1
LF2
CN1
CN2
R9
SEMI REG 15V ADJ

Regelplatte
Regulator board


R26
SWD 5V ADJ
PB10166A2-02 ,C2-01
REGULATOR PWB ASS'Y
SW. REG. PWB
PB10166 -01-03
SECONDARY
PRIMARY
RY1
LF1
FUSE 1
FUSE 2
BRN LIVE
BLU NEUTRAL
IC2
IC3
IC101
TP1
TP2
TP3

Netzteil
Power supply



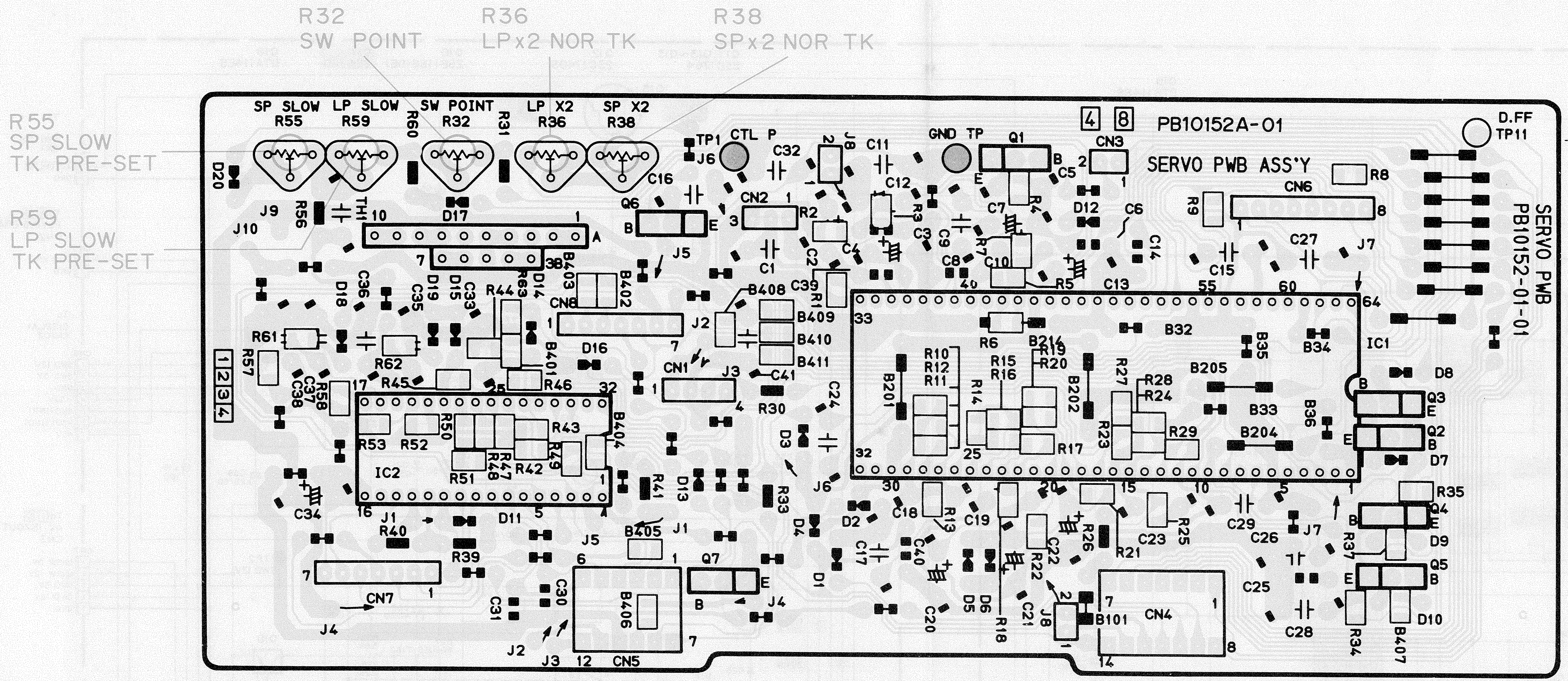
0 2 REGURATOR
AC OUTLET
SWITCHED MAX. 2A
RY 1
F2 2.0A
AC220V 50/60Hz
LIVE BRN
BLU NEUTRAL
F1 1.25A
LF 1
LF 2
C1 0.047
0.068
C2 0.022
C17 0.001
C18 0.001
C19 0.001
C20 0.001
T 1
D1~D4 10E6-F2
R1 2.2 2W
C8 0.0022
C7 0.0022
C10 100/400
R2 330K
R3 330K
R4 100K 2W
C11 0.0047
C12 120P
D5 RU1A
D6 RU1A
D7 AU01Z
D8 AU01Z
IC 1 STR-D1706
C13 0.0022
C14 0.47
R6 200 2W
C9 22/50
R5 100K
D28 AU01Z
R9 100
C15 180/16
D9 AU01Z
D10 AU01Z
R7 0.39 2W
R9 SEMI REG 15V ADJ
D13 AU01Z
L14 100
C33 47/63
C38 22/63
D11 F6P20F
L12 33
C31 2200 /25
C36 1000/25
C39 22/50
C34 47/50
L11 33
C35 1000/25
D14 AU01Z
L15 100
D12 F5KQ40B
L13 33
C32 3300/10
C37 1000/10
D15 RD16ES-T1B2
L16 8.2
C40 0.001
R11 33K
L17 8.2
C41 0.001
0 1 SWITCHING POWER SUPPLY
CN1
CN3
-30V
+45V
GND
SEMIREG 7V
GND
GND
SEMIREG 15V
GND(M)
15V(M)
To DISPLAY/ SWITCH CN103
CN2
AC 5V
AC 5V
GND
Q19 DTB114ES
D18
D22
Q19
Q11, Q13~Q15 2SD1764
Q12 2SC1740S
Q16 2SB1186(DE)
Q17 2SA720
Q18 DTA114ES
Q15
CP CP3 ICP-F20
CP CP2 ICP-F25
R31 1K
R29 10K
R30 3.9K
C53 100/16
C54 10/50
D20 RD13ES-T1B3
TP GND
To SWITCH CN4
CN4
AC ONLINE
GND
To 4 6 FLYING ERASE CN2
CN5
SWD 12V
GND
TP3 UNSW 12V
Q16
Q11
Q17
CP1 ICP-F25 CP
R32 4.7K
R33 330
R15 3.6K
C43 0.01
R52 5.6K
R43 3.9K
R14 2.2K
Q12
C45 10/50
R16 4.7K
C58 22/50
D21 HZS33EB1
C60 22/50
R34 2.7K
C59 22/50
L18 100
D16 RD6.2ES-T1B3
C44 100/16
To DISPLAY CN102
CN6
SWD 12V
SWD 5V
GND
-30V
GND(IND)
-30V(IND)
45V
To 1 0 AV IN/OUT CN3
CN7
UNSW 5V
UNSW 12V
SWD 5V
SWD 12V
GND
TP2 SWD 12V
Q13
R35 22FR
R36 22FR
R44 1
R45 1
R46 1
R47 1
C52 47/50
R18 6.2K
D27 RD20ES-T1B2
R20 1K
C46 0.01
R53 5.6K
R28 2.2K
R26 2.2K
Q18
D23
R17 1K
C47 0.01
D24
IC2
1/4
R21 15K
R26 SWD 5V ADJ
D17 RD5.1ES -T1B2
R27 22K
D19 HZ6B1TE
R19 4.7K
C48 100/16
From/To 0 4 MECHACON CN9
CN8
GND
UNSW 12V
SWD 5V
POWER ON/OFF
MOTOR 12V
SWD 12V
GND (M)
SEMIREG 15V(M)
Q14
R51
R48 1
R49 1
R50 1
R24 1K
C49 0.01
R23 1K
D25
R22 4.7K
C50 0.01
D26
R25 15K
C51 100/10
TP1 SWD 5V
To 0 5 VIDEO CN3
CN9
SWD 12V
SWD 5V
GND
To 4 3 PRE/REC AMP CN3
CN10
SWD 12V
SWD 5V
GND
To 0 9 AUDIO CN1
CN11
SEMIREG 15V
GND
SEMIREG 7V
IC101 M54647L
IC3 MC7805ACT
REG 5V
C55 0.01
C57 100/10
C56 0.01
IN- IN+ VR OUT1 IN2 GND GND IN1 OUT2 Vcc Vcc NC
C102 1/50
C101 47/25
CP101 ICP-F25 CP
IC2 BA10324
CN18
IN -
IN +
VR
REEL M+
REEL -
REEL +
REEL M-
VS
From/To 0 4 MECHACON CN18

MOTOR	MODE	PINS			
		INPUT		OUTPUT	
		⑤	⑧	④	⑨
REEL	FWD	H	L	L	H
	REV	L	H	H	L
BRAKE		H	H	L	L
STOP		L	L	O	O

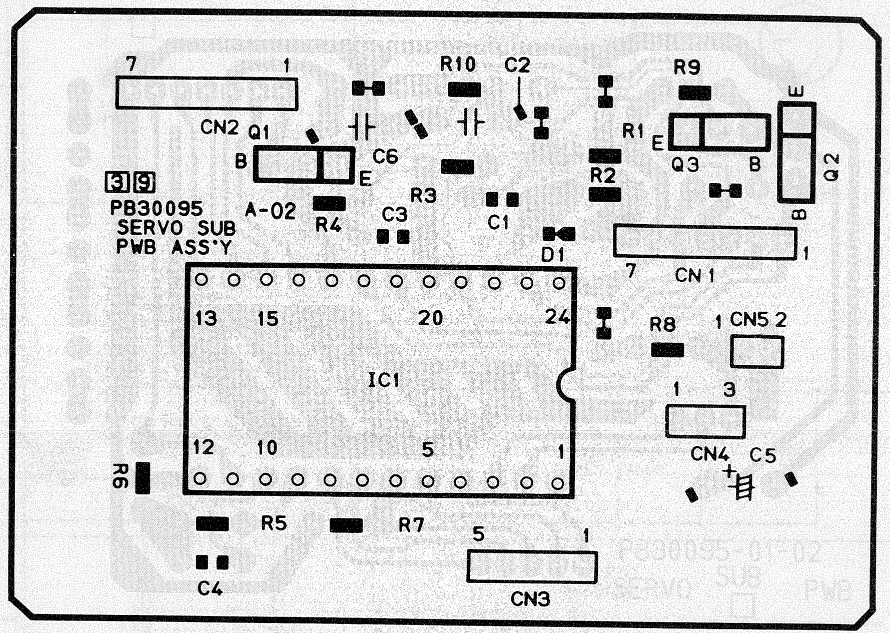
* nur beim Export Modell
Export model only

△ nicht beim Export Modell
not Export model

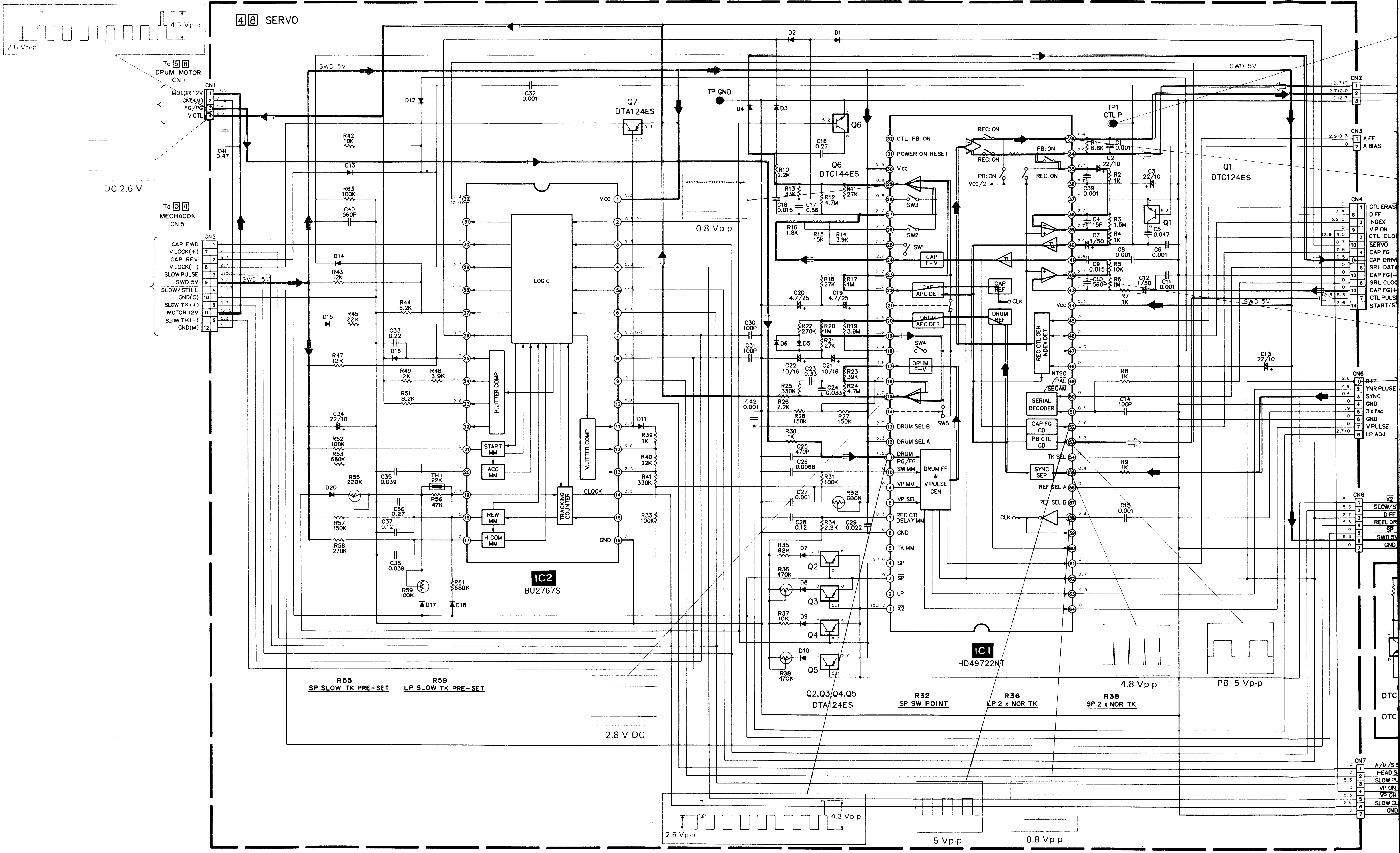
Servoplatte
Servo board

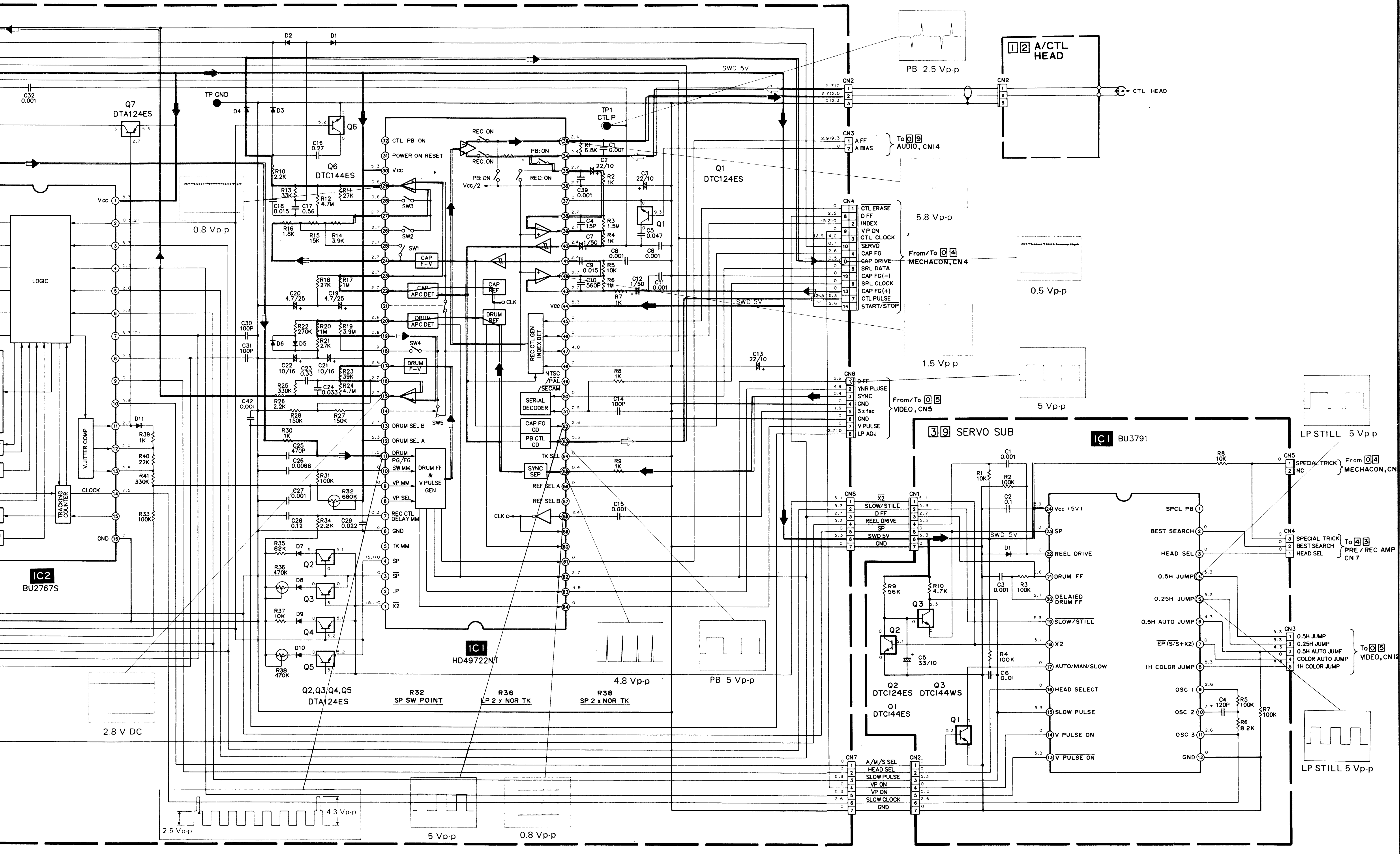

R32
SW POINT
R36
LPx2 NOR TK
R38
SPx2 NOR TK
R55
SP SLOW
TK PRE-SET
R59
LP SLOW
TK PRE-SET
SP SLOW R55
LP SLOW R59
SW POINT R32
LP X2 R36
SP X2 R38
TP1 CTL P
GND TP
D.FF TP11
4 8
PB10152A-01
SERVO PWB ASS'Y
SERVO PWB
PB10152-01-01
IC1
IC2
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8
Q1
Q2
Q3
Q4
Q5
Q6
Q7
1 2 3 4

Servo Zusatzplatte
Servo sub board


3 9
PB30095
A-02
SERVO SUB
PWB ASS'Y
IC1
CN1
CN2
CN3
CN4
CN5
Q1
Q2
Q3
PB30095-01-02
SERVO SUB PWB

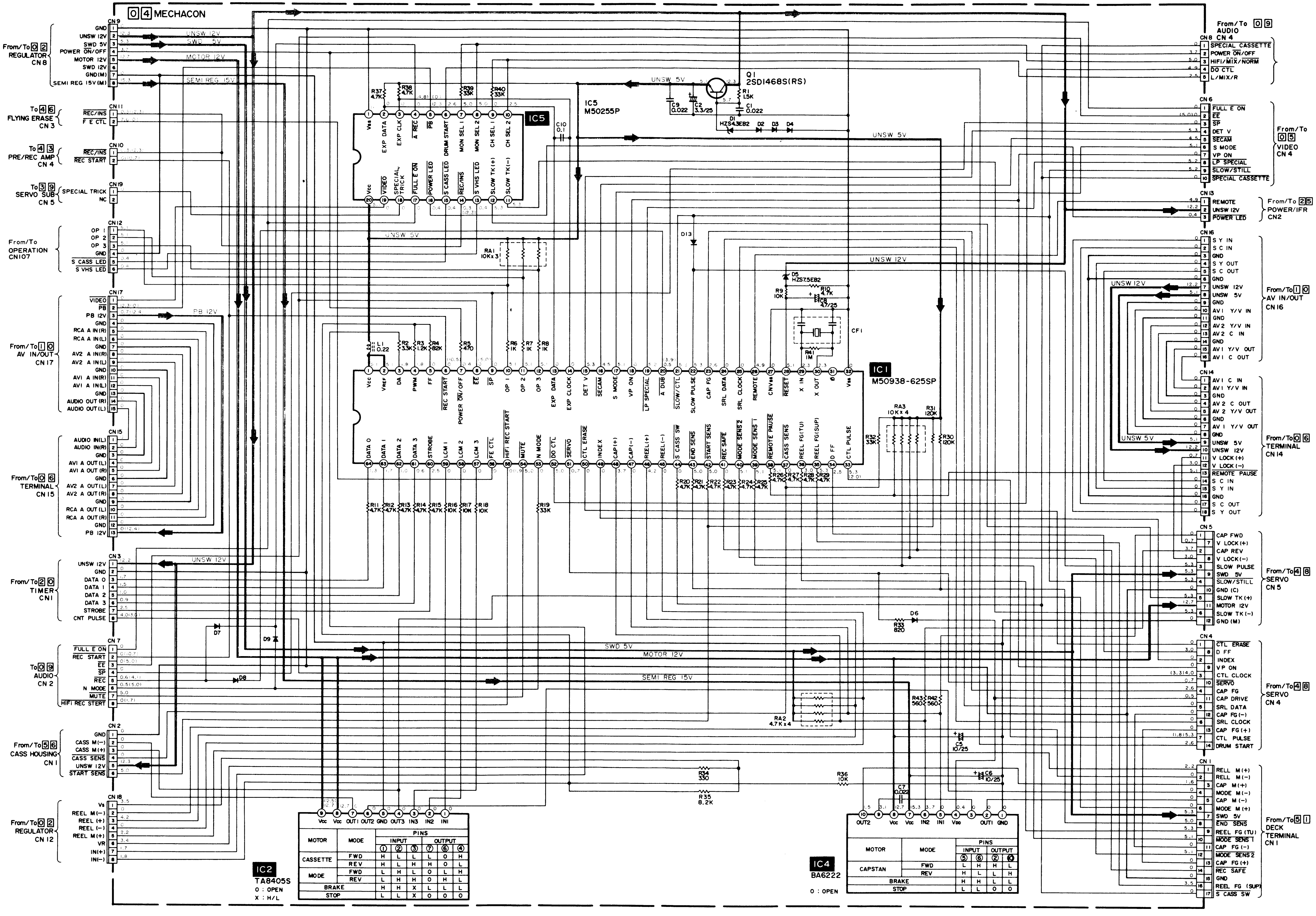
Servo


48 SERVO
4.5 Vp-p
2.6 Vp-p
To 58 DRUM MOTOR CN1
MOTOR 12V
GND(M)
FG/PG
V CTL
CN1
C41 0.47
DC 2.6 V
To 04 MECHACON CN5
CN5
CAP FWD
V LOCK(+)
CAP REV
V LOCK(-)
SLOW PULSE
SWD 5V
SLOW/STILL
GND(C)
SLOW TK(+)
MOTOR 12V
SLOW TK(-)
GND(M)
SWD 5V
D12
C32 0.001
Q7 DTA124ES
TP GND
D2
D1
D4
D3
Q6
C16 0.27
Q6 DTC144ES
R10 2.2K
R42 10K
D13
R63 100K
C40 560P
D14
R43 12K
D15
R45 22K
R44 8.2K
C33 0.22
D16
R47 12K
R49 12K
R48 3.9K
R51 8.2K
C34 22/10
R52 100K
R53 680K
C35 0.039
R55 220K
D20
TH1 22K
R56 47K
C36 0.27
C37 0.12
R57 150K
R58 270K
C38 0.039
R59 100K
R61 680K
D17
D18
LOGIC
H.JITTER COMP
START MM
ACC MM
REW MM
H.COM MM
TRACKING COUNTER
V.JITTER COMP
CLOCK
Vcc
GND
D11
R39 1K
R40 22K
R41 330K
R33 100K
IC2
BU2767S
0.8 Vp-p
R55 SP SLOW TK PRE-SET
R59 LP SLOW TK PRE-SET
2.8 V DC
4.3 Vp-p
2.5 Vp-p
R13 33K
R12 4.7M
R11 27K
C18 0.015
C17 0.56
R16 1.8K
R15 15K
R14 3.9K
SW1
SW2
SW3
SW4
SW5
C20 4.7/25
R18 27K
R17 1M
C19 4.7/25
C30 100P
C31 100P
R22 270K
R20 1M
R19 3.9M
R21 27K
D6
D5
C22 10/16
C23 0.33
C21 10/16
R23 39K
R25 330K
C24 0.033
R24 4.7M
R26 2.2K
C42 0.001
R28 150K
R27 150K
R30 1K
C25 470P
C26 0.0068
R31 100K
C27 0.001
R32 680K
C28 0.12
R34 2.2K
C29 0.022
R35 82K
D7
Q2
R36 470K
D8
Q3
R37 10K
D9
Q4
R38 470K
D10
Q5
Q2,Q3,Q4,Q5 DTA124ES
CTL PB ON
POWER ON RESET
Vcc
CAP F-V
CAP APC DET
DRUM APC DET
DRUM F-V
DRUM SEL B
DRUM SEL A
DRUM PG/FG
SW MM
VP MM
VP SEL
REC CTL DELAY MM
GND
TK MM
SP
SP
LP
X2
DRUM FF & V PULSE GEN
IC1
HD49722NT
R32 SP SW POINT
R36 LP 2 x NOR TK
R38 SP 2 x NOR TK
TP1 CTL P
REC: ON
PB: ON
REC: ON
PB: ON
REC: ON
Vcc/2
R1 6.8K
C1 0.001
C2 22/10
R2 1K
C3 22/10
C39 0.001
C4 15P
R3 1.5M
C7 1/50
R4 1K
C5 0.047
Q1
C8 0.001
C6 0.001
C9 0.015
R5 10K
C10 560P
R6 1M
C12 1/50
C11 0.001
R7 1K
CAP REF
CLK
DRUM REF
REC CTL GEN INDEX DET
NTSC /PAL /SECAM
SERIAL DECODER
CAP FG CD
PB CTL CD
TK SEL
SYNC SEP
REF SEL A
REF SEL B
CLK
R8 1K
C13 22/10
C14 100P
R9 1K
C15 0.001
Q1 DTC124ES
4.8 Vp-p
PB 5 Vp-p
5 Vp-p
0.8 Vp-p
CN2
CN3
A FF
A BIAS
CN4
CTL ERASE
D FF
INDEX
VP ON
CTL CLOCK
SERVO
CAP FG
CAP DRIVE
SRL DATA
CAP FG(-)
SRL CLOCK
CAP FG(+)
CTL PULSE
START/ST
CN6
D FF
YNR PULSE
SYNC
GND
3 x fsc
GND
V PULSE
LP ADJ
CN8
X2
SLOW/ST
D FF
REEL DR
SP
SWD 5V
GND
CN7
A/M/S S
HEAD S
SLOW PU
VP ON
VP ON
SLOW CL
GND
DTC
DTC



IC1 HD49722NT
IC2 BU2767S
LOGIC
TRACKING COUNTER
V.JITTER COMP
CLOCK
Q7 DTA124ES
Q6 DTC144ES
Q1 DTC124ES
Q2,Q3,Q4,Q5 DTA124ES
TP GND
TP1 CTL P
SWD 5V
CTL PB ON
POWER ON RESET
Vcc
DRUM SEL B
DRUM SEL A
DRUM PG/FG
SW MM
VP MM
VP SEL
REC CTL DELAY MM
GND
TK MM
SP
LP
X2
CAP F-V
CAP APC DET
DRUM APC DET
DRUM F-V
CAP REF
DRUM REF
CLK
REC CTL GEN INDEX DET
NTSC /PAL /SECAM
SERIAL DECODER
CAP FG CD
PB CTL CD
SYNC SEP
TK SEL
REF SEL A
REF SEL B
DRUM FF & V PULSE GEN
REC: ON
PB: ON
Vcc/2
SW1
SW2
SW3
SW4
SW5
R32 SP SW POINT
R36 LP 2 x NOR TK
R38 SP 2 x NOR TK
PB 2.5 Vp-p
0.8 Vp-p
5.8 Vp-p
0.5 Vp-p
1.5 Vp-p
5 Vp-p
4.8 Vp-p
PB 5 Vp-p
2.8 V DC
2.5 Vp-p
4.3 Vp-p
LP STILL 5 Vp-p
12 A/CTL HEAD
CTL HEAD
CN2
CN3
A FF
A BIAS
To 09 AUDIO, CN14
CN4
CTL ERASE
D FF
INDEX
VP ON
CTL CLOCK
SERVO
CAP FG
CAP DRIVE
SRL DATA
CAP FG(-)
SRL CLOCK
CAP FG(+)
CTL PULSE
START/STOP
From/To 04 MECHACON, CN4
CN6
D FF
YNR PULSE
SYNC
GND
3 x fsc
V PULSE
LP ADJ
From/To 05 VIDEO, CN5
CN8
X2
SLOW/STILL
REEL DRIVE
SWD 5V
CN7
A/M/S SEL
HEAD SEL
SLOW PULSE
VP ON
SLOW CLOCK
39 SERVO SUB
IC1 BU3791
Vcc (5V)
DRUM FF
DELAIED DRUM FF
AUTO/MAN/SLOW
HEAD SELECT
SLOW PULSE
V PULSE ON
SPCL PB
BEST SEARCH
HEAD SEL
0.5H JUMP
0.25H JUMP
0.5H AUTO JUMP
EP (S/S+X2)
1H COLOR JUMP
OSC 1
OSC 2
OSC 3
Q2 DTC124ES
Q3 DTC144WS
Q1 DTC144ES
CN5
SPECIAL TRICK
NC
From 04 MECHACON, CN
SPECIAL TRICK
To 43 PRE / REC AMP CN 7
0.5H AUTO JUMP
COLOR AUTO JUMP
1H COLOR JUMP
To 05 VIDEO, CN12

Mechaniksteuerung
Mechanism control


04 MECHACON
CN9
From/To 02 REGULATOR CN8
GND
UNSW 12V
SWD 5V
POWER ON/OFF
MOTOR 12V
SWD 12V
GND(M)
SEMI REG 15V(M)
CN11
To 46 FLYING ERASE CN3
REC/INS
F E CTL
CN10
To 43 PRE/REC AMP CN4
REC/INS
REC START
CN19
To 39 SERVO SUB CN5
SPECIAL TRICK
NC
CN12
From/To OPERATION CN107
OP 1
OP 2
OP 3
GND
S CASS LED
S VHS LED
CN17
From/To 10 AV IN/OUT CN17
VIDEO
PB
PB 12V
GND
RCA A IN(R)
RCA A IN(L)
GND
AV2 A IN(R)
AV2 A IN(L)
GND
AV1 A IN(R)
AV1 A IN(L)
GND
AUDIO OUT(R)
AUDIO OUT(L)
CN15
From/To 06 TERMINAL CN15
AUDIO IN(L)
AUDIO IN(R)
GND
AV1 A OUT(L)
AV1 A OUT(R)
GND
AV2 A OUT(L)
AV2 A OUT(R)
GND
RCA A OUT(L)
RCA A OUT(R)
GND
PB 12V
CN3
From/To 20 TIMER CN1
UNSW 12V
GND
DATA 0
DATA 1
DATA 2
DATA 3
STROBE
CNT PULSE
CN7
To 09 AUDIO CN2
FULL E ON
REC START
EE
SP
REC
N MODE
MUTE
HIFI REC START
CN2
From/To 56 CASS HOUSING CN1
GND
CASS M(−)
CASS M(+)
CASS SENS
UNSW 12V
START SENS
CN18
From/To 02 REGULATOR CN12
Vs
REEL M(−)
REEL (+)
REEL (−)
REEL M(+)
VR
IN(+)
IN(−)
UNSW 12V
SWD 5V
MOTOR 12V
SEMI REG 15V
UNSW 5V
PB 12V
IC5
M50255P
Vss
EXP DATA
EXP CLK
A REC
PB
DRUM START
MON SEL 1
MON SEL 2
CH SEL 1
CH SEL 2
Vcc
VIDEO
SPECIAL TRICK
FULL E ON
POWER LED
S CASS LED
REC/INS
S VHS LED
SLOW TK(+)
SLOW TK(−)
R37 4.7K
R38 4.7K
R39 33K
R40 33K
C10 0.1
Q1
2SD1468S(RS)
R1 1.5K
C1 0.022
C9 0.022
C2 3.3/25
D1 HZS4.3EB2
D2
D3
D4
D13
RA1 10K×3
IC1
M50938-625SP
Vcc
Vref
DA
PWM
FF
REC START
POWER ON/OFF
EE
SP
OP 1
OP 2
OP 3
EXP DATA
EXP CLOCK
DET V
SECAM
S MODE
VP ON
LP SPECIAL
A DUB
SLOW/CTL
SLOW PULSE
CAP FG
SRL DATA
SRL CLOCK
REMOTE
CNVss
RESET
X IN
X OUT
Ø
Vss
DATA 0
DATA 1
DATA 2
DATA 3
STROBE
LCM 1
LCM 2
LCM 3
FE CTL
HIFI REC START
MUTE
N MODE
DO CTL
SERVO
CTL ERASE
INDEX
CAP(+)
CAP(−)
REEL(+)
REEL(−)
S CASS SW
END SENS
START SENS
REC SAFE
MODE SENS 2
MODE SENS 1
REMOTE PAUSE
CASS SENS
REEL FG(TU)
REEL FG(SUP)
D FF
CTL PULSE
L1 0.22
R2 3.3K
R3 1.2K
R4 82K
R5 470
R6 1K
R7 1K
R8 1K
D5 HZS7.5EB2
R9 10K
R10 4.7K
C8 4.7/25
R41 1M
CF1
RA3 10K×4
R31 120K
R32 33K
R30 120K
R11 4.7K
R12 4.7K
R13 4.7K
R14 4.7K
R15 4.7K
R16 10K
R17 10K
R18 10K
R19 33K
R20 4.7K
R21 4.7K
R22 4.7K
R23 4.7K
R24 4.7K
R25 4.7K
R26 4.7K
R27 4.7K
R28 4.7K
R29 4.7K
D6
R33 820
D7
D8
D9
R43 560
R42 560
RA2 4.7K×4
C5 10/25
R34 330
R35 8.2K
R36 10K
C7 0.022
C6 10/25
IC2
TA8405S
O : OPEN
X : H/L
Vcc
Vcc
OUT1
OUT2
GND
OUT3
IN3
IN2
IN1
IC4
BA6222
O : OPEN
OUT2
Vcc
Vcc
IN2
IN1
Voo
OUT1
GND
From/To 09 AUDIO CN4
CN8
SPECIAL CASSETTE
POWER ON/OFF
HIFI/MIX/NORM
DO CTL
L/MIX/R
CN6
From/To 05 VIDEO CN4
FULL E ON
EE
SP
DET V
SECAM
S MODE
VP ON
LP SPECIAL
SLOW/STILL
SPECIAL CASSETTE
CN13
From/To 25 POWER/IFR CN2
REMOTE
UNSW 12V
POWER LED
CN16
From/To 10 AV IN/OUT CN16
S Y IN
S C IN
GND
S Y OUT
S C OUT
GND
UNSW 12V
UNSW 5V
GND
AV1 Y/V IN
GND
AV2 Y/V IN
AV2 C IN
GND
AV1 Y/V OUT
AV1 C OUT
CN14
From/To 06 TERMINAL CN14
AV1 C IN
AV1 Y/V IN
GND
AV2 C OUT
AV2 Y/V OUT
GND
AV1 Y/V OUT
GND
UNSW 5V
UNSW 12V
V LOCK(+)
V LOCK(−)
REMOTE PAUSE
S C IN
S Y IN
GND
S C OUT
S Y OUT
CN5
From/To 48 SERVO CN5
CAP FWD
V LOCK(+)
CAP REV
V LOCK(−)
SLOW PULSE
SWD 5V
SLOW/STILL
GND (C)
SLOW TK(+)
MOTOR 12V
SLOW TK(−)
GND (M)
CN4
From/To 48 SERVO CN4
CTL ERASE
D FF
INDEX
VP ON
CTL CLOCK
SERVO
CAP FG
CAP DRIVE
SRL DATA
CAP FG(−)
SRL CLOCK
CAP FG(+)
CTL PULSE
DRUM START
CN1
From/To 51 DECK TERMINAL CN1
REEL M(+)
REEL M(−)
CAP M(+)
MODE M(−)
CAP M(−)
MODE M(+)
SWD 5V
END SENS
REEL FG (TU)
MODE SENS 1
CAP FG(−)
MODE SENS 2
CAP FG(+)
REC SAFE
GND
REEL FG (SUP)
S CASS SW

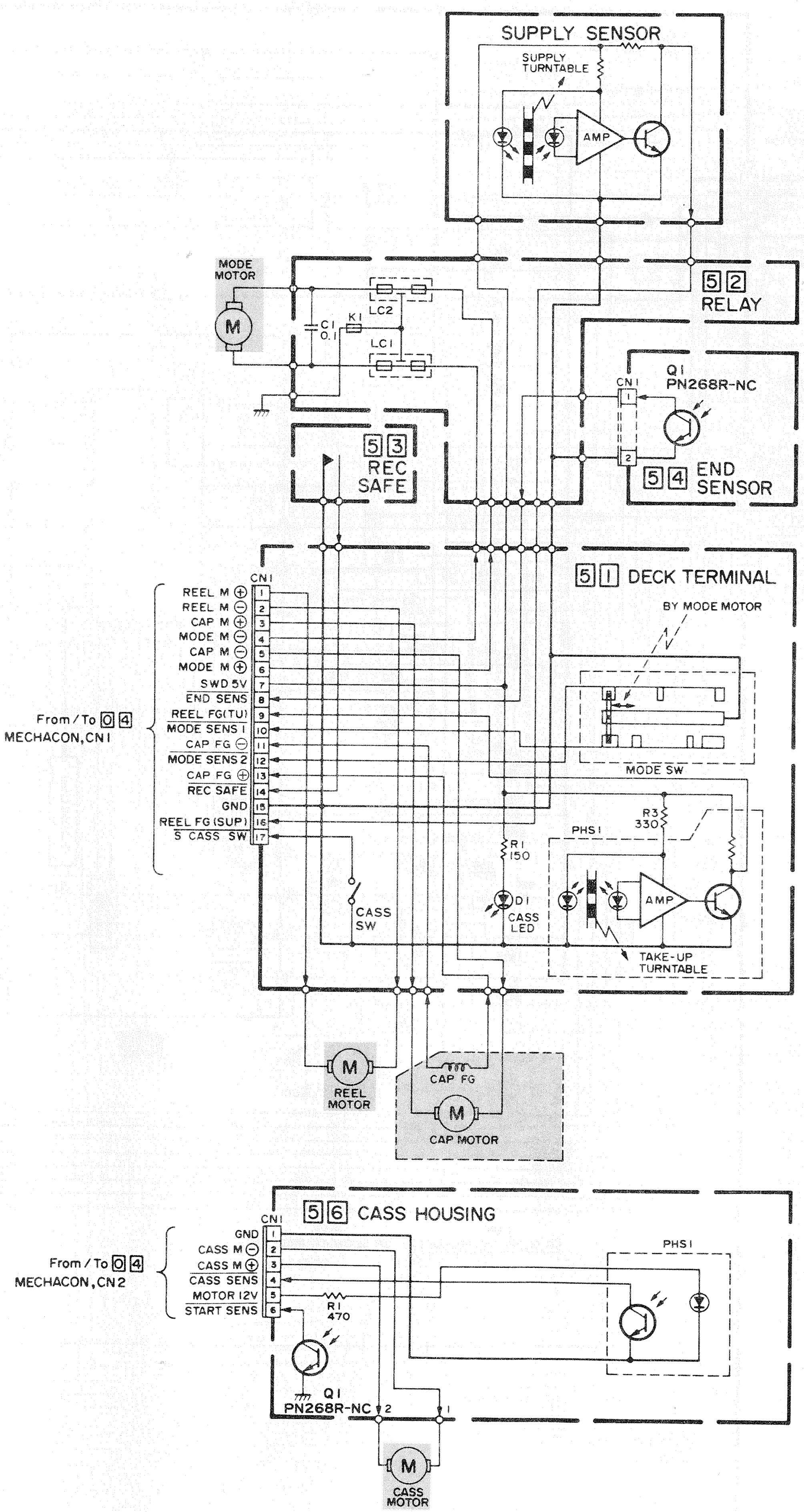
IC2
TA8405S
O : OPEN
X : H/L

MOTOR	MODE	PINS					
		INPUT			OUTPUT		
		①	②	③	⑦	⑥	④
CASSETTE	FWD	H	L	L	L	O	H
	REV	H	L	H	H	O	L
MODE	FWD	L	H	L	O	L	H
	REV	L	H	H	O	H	L
BRAKE		H	H	X	L	L	L
STOP		L	L	X	O	O	O

IC4
BA6222
O : OPEN

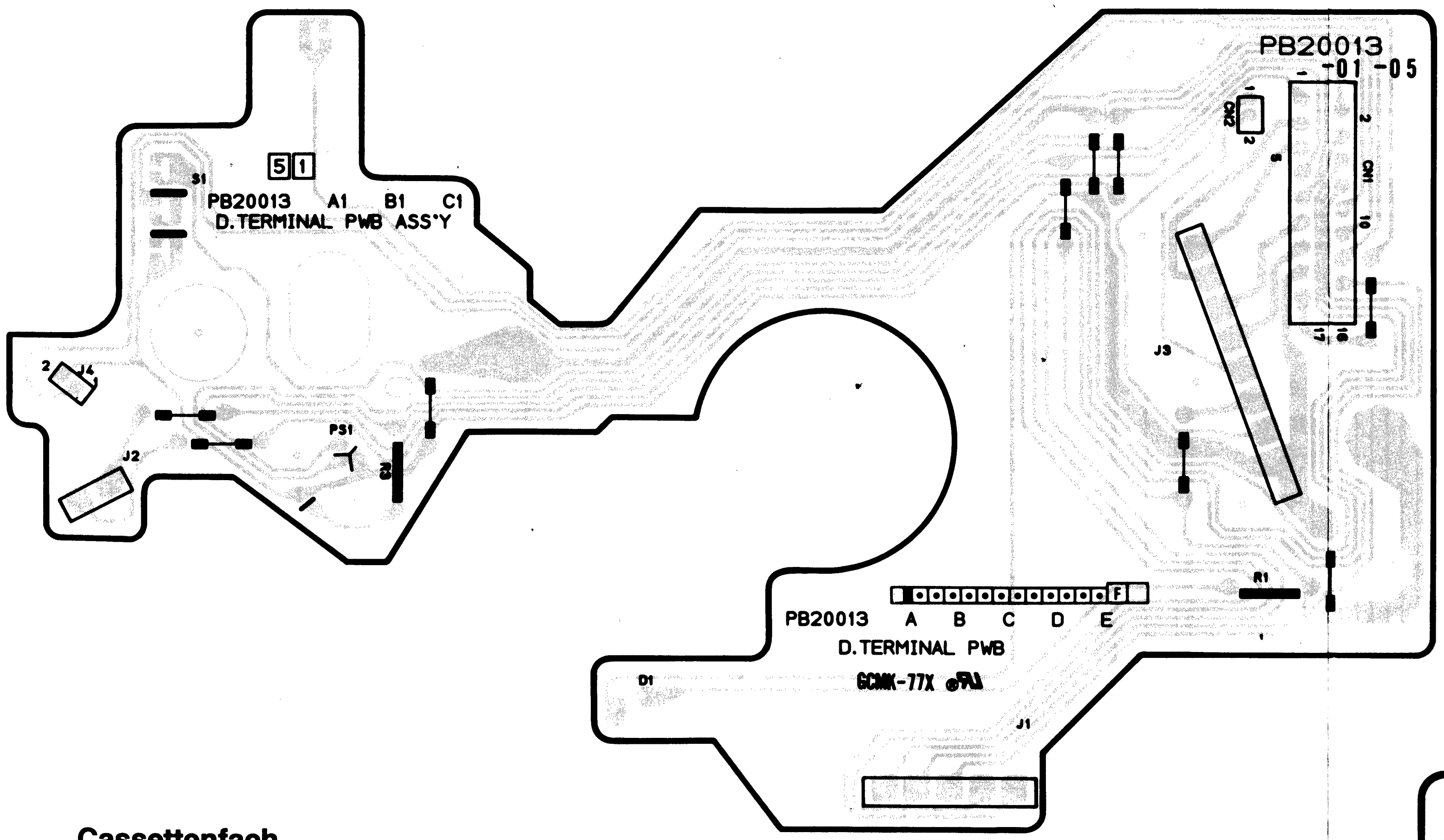
MOTOR	MODE	PINS			
		INPUT		OUTPUT	
		⑤	⑥	②	⑩
CAPSTAN	FWD	L	H	H	L
	REV	H	L	L	H
BRAKE		H	H	L	L
STOP		L	L	O	O

Motoren- und Sensor-Anschlüsse
Deck terminal

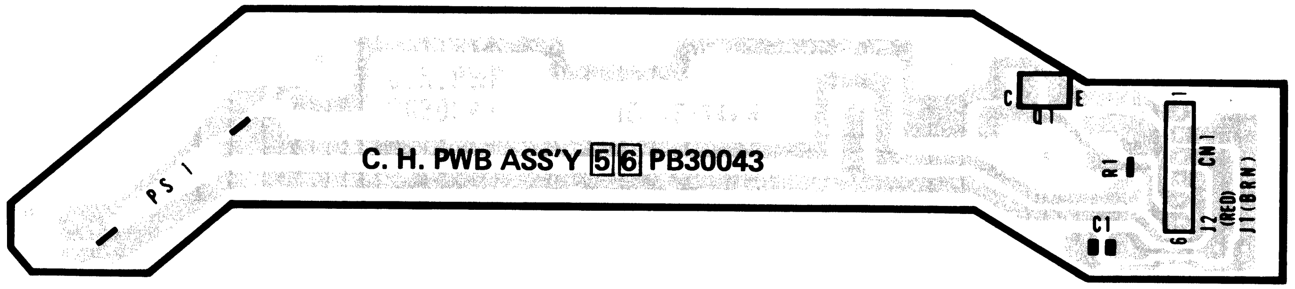


SUPPLY SENSOR
SUPPLY TURNTABLE
AMP
MODE MOTOR
M
C1 0.1
K1
LC2
LC1
52 RELAY
CN1
Q1 PN268R-NC
53 REC SAFE
54 END SENSOR
CN1
51 DECK TERMINAL
BY MODE MOTOR
REEL M ⊕
REEL M ⊖
CAP M ⊕
MODE M ⊖
CAP M ⊖
MODE M ⊕
SWD 5V
END SENS
REEL FG(TU)
MODE SENS 1
CAP FG ⊖
MODE SENS 2
CAP FG ⊕
REC SAFE
GND
REEL FG(SUP)
S CASS SW
From / To 04 MECHACON, CN1
MODE SW
R3 330
PHS1
R1 150
D1 CASS LED
CASS SW
AMP
TAKE-UP TURNTABLE
REEL MOTOR
CAP FG
CAP MOTOR
56 CASS HOUSING
CN1
GND
CASS M ⊖
CASS M ⊕
CASS SENS
MOTOR 12V
START SENS
From / To 04 MECHACON, CN2
R1 470
PHS1
Q1 PN268R-NC
CASS MOTOR

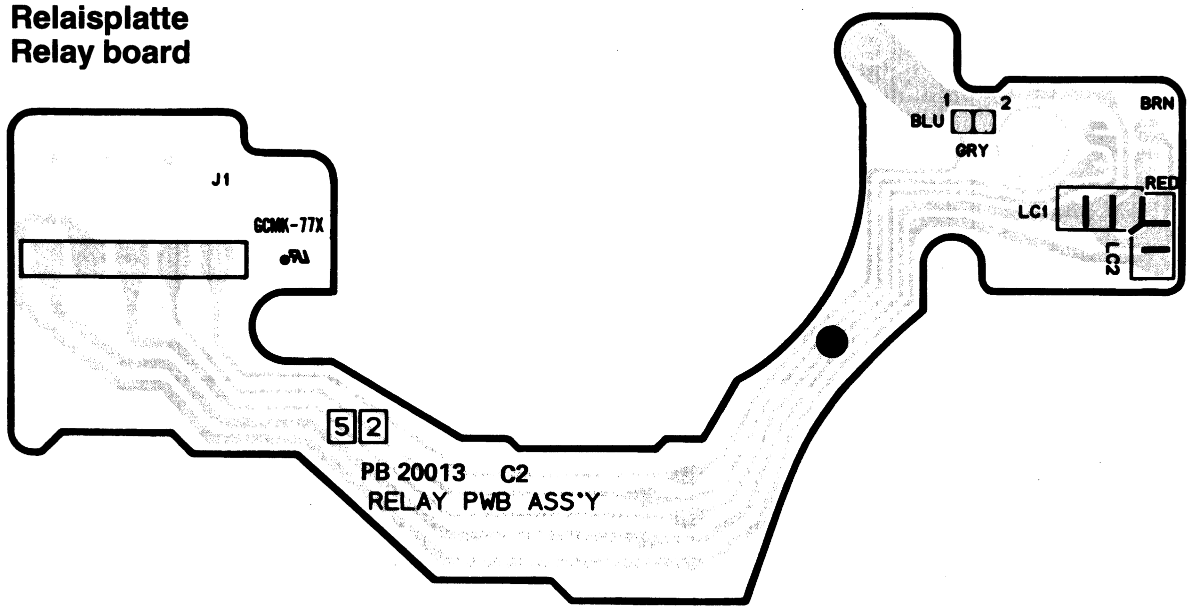
Motoren- und Sensor-Anschlußplatte
Deck terminal board


51
PB20013 A1 B1 C1
D.TERMINAL PWB ASS'Y
S1
J4
J2
PS1
J3
CN2
CN1
PB20013
-01 -05
R1
PB20013 A B C D E
D.TERMINAL PWB
GCMK-77X
D1
J1

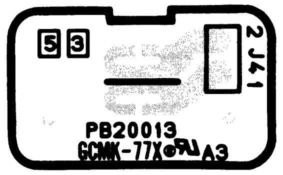
Cassettenfach
Cassette housing


C. H. PWB ASS'Y 56 PB30043
PS1
Q1
C
E
R1
CN1
C1
J2 (RED)
J1 (BRN)

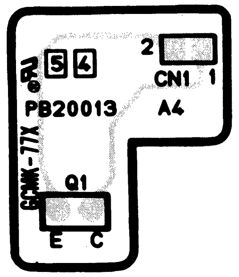
Relaisplatte
Relay board


J1
GCMK-77X
BLU
GRY
BRN
RED
LC1
LC2
52
PB 20013 C2
RELAY PWB ASS'Y

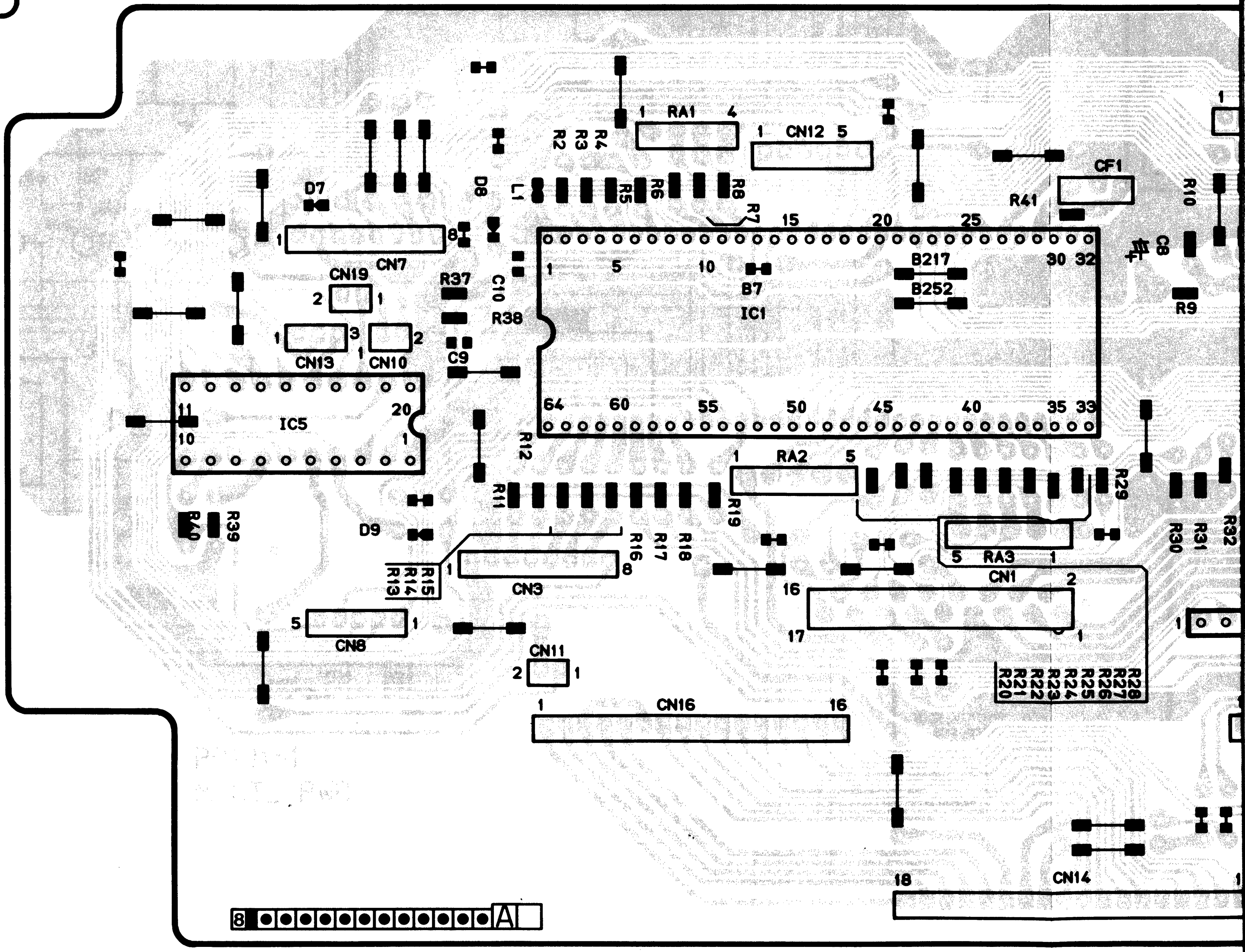
Aufnahme Sicherungsplatte
REC safety board

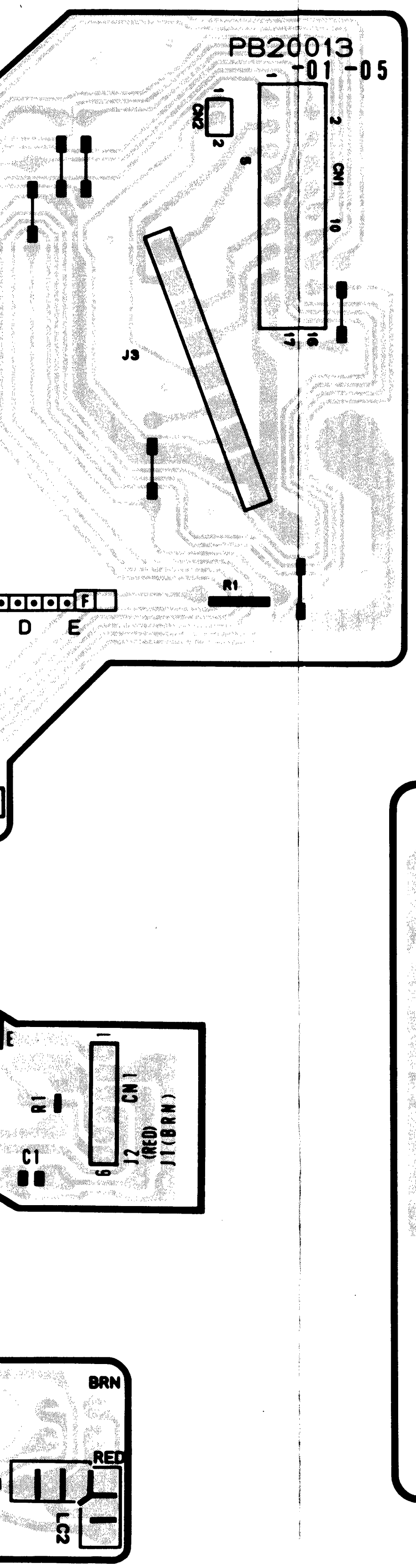

53
J41
PB20013
GCMK-77X A3

Endsensorplatte
End sensor board


54
CN1
PB20013 A4
GCMK-77X
Q1
E C

Mechanik Steuerplatte
Mechanism control board


RA1
CN12
R2 R3 R4
D8
L1
R5 R6 R7 R8
D7
CN7
R41
CF1
R10
C8
IC1
B217
B252
B7
R9
CN19
R37
C10
R38
CN13
CN10
C9
IC5
R12
R11
RA2
R19
R29
R39
R40
D9
R13 R14 R15
R16 R17 R18
CN3
RA3
CN1
R30 R31 R32
CN8
CN11
CN16
R20 R21 R22 R23 R24 R25 R26 R27 R28
CN14
8
A


PB20013
-01-05
CN1
J3
R1
D
E
F
C1
J2 (RED)
J1 (BRN)
BRN
RED
LC2

Aufnahme Sicherungsplatte
REC safety board

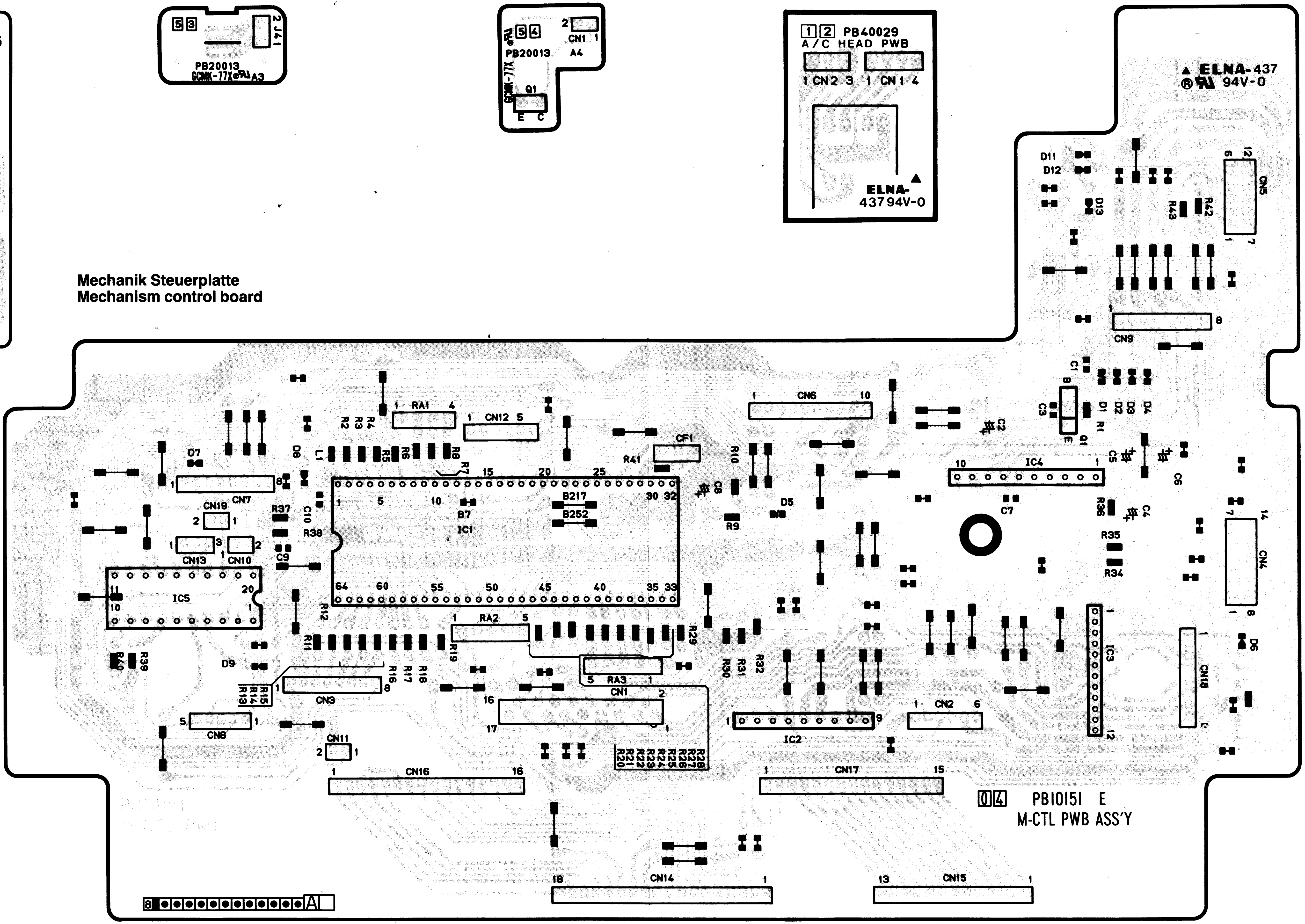
53
J41
PB20013
GCMK-77X
A3

Endsensorplatte
End sensor board

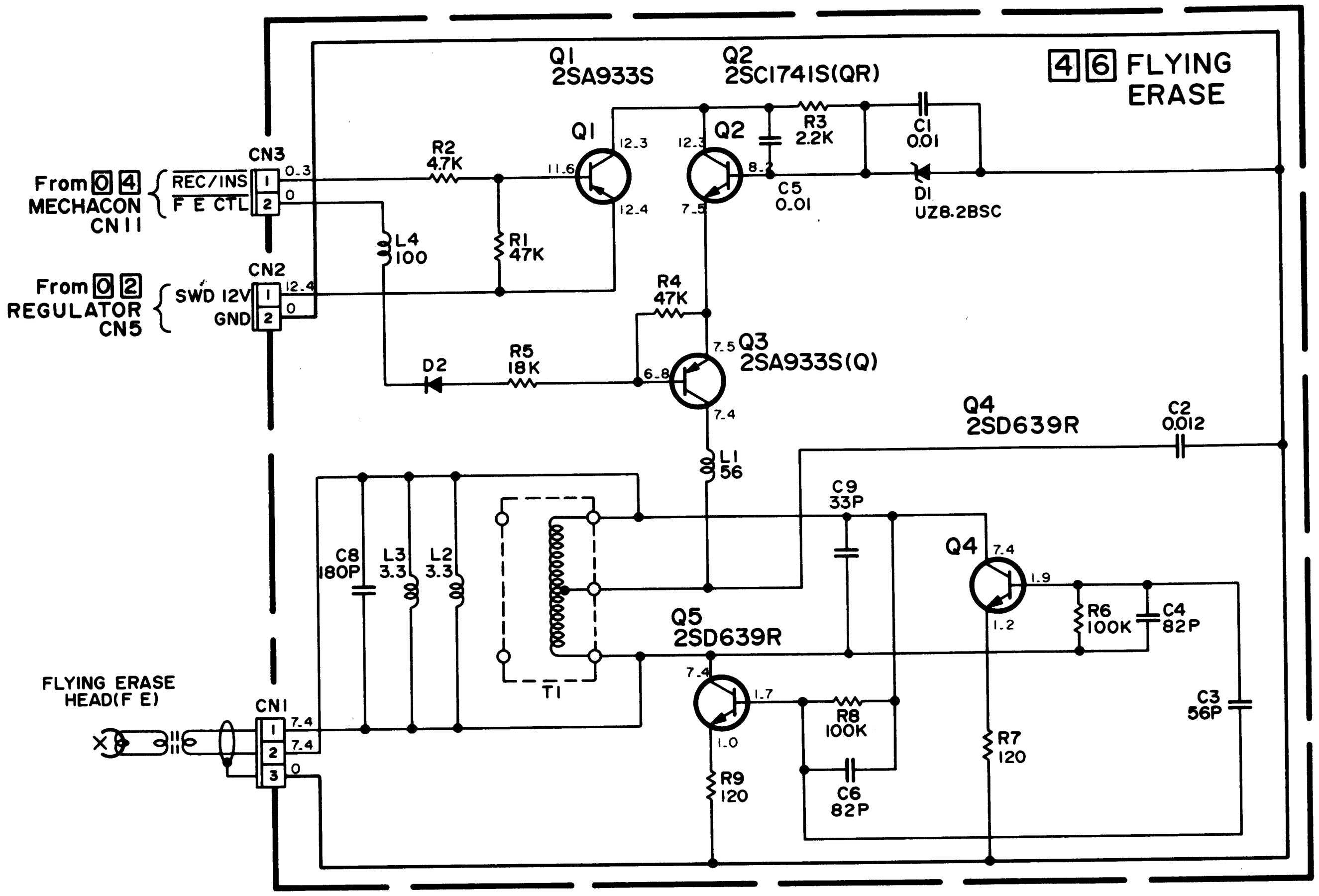
54
CN1
PB20013
A4
GCMK-77X
Q1
E
C

Audio/Kontrollkopf
A/C head

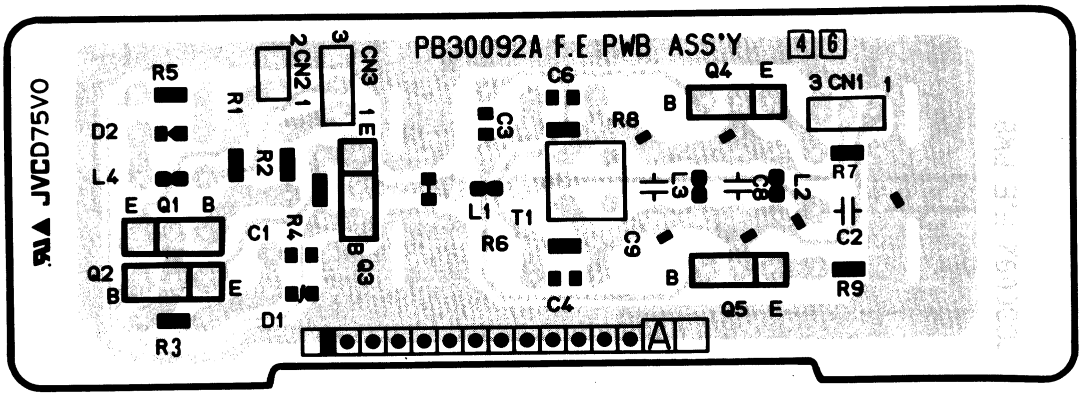
Mechanik Steuerplatte
Mechanism control board


12
PB40029
A/C HEAD PWB
1 CN2 3
1 CN1 4
ELNA-437
94V-0
ELNA-437 94V-0
D11
D12
D13
R42
R43
CN5
CN9
C1
C2
C3
C5
C6
C4
C7
D1
D2
D3
D4
R1
Q1
B
E
CN6
RA1
CN12
CF1
R41
R10
D5
R9
C8
IC4
R36
R35
R34
CN4
IC3
CN18
D6
D7
D8
L1
R2
R3
R4
R5
R6
R7
R8
CN7
CN19
CN13
CN10
R37
C10
R38
C9
IC1
B7
B217
B252
IC5
R12
R11
RA2
R19
R29
R30
R31
R32
RA3
CN1
IC2
CN2
R40
R39
D9
R13
R14
R15
R16
R17
R18
CN3
CN8
CN11
CN16
CN17
R20
R21
R22
R23
R24
R25
R26
R27
R28
CN14
CN15
04
PB10151 E
M-CTL PWB ASS'Y
8
A

Fliegender Löschkopf – Schaltung und Platte
Flying erase schematic diagram and circuit board

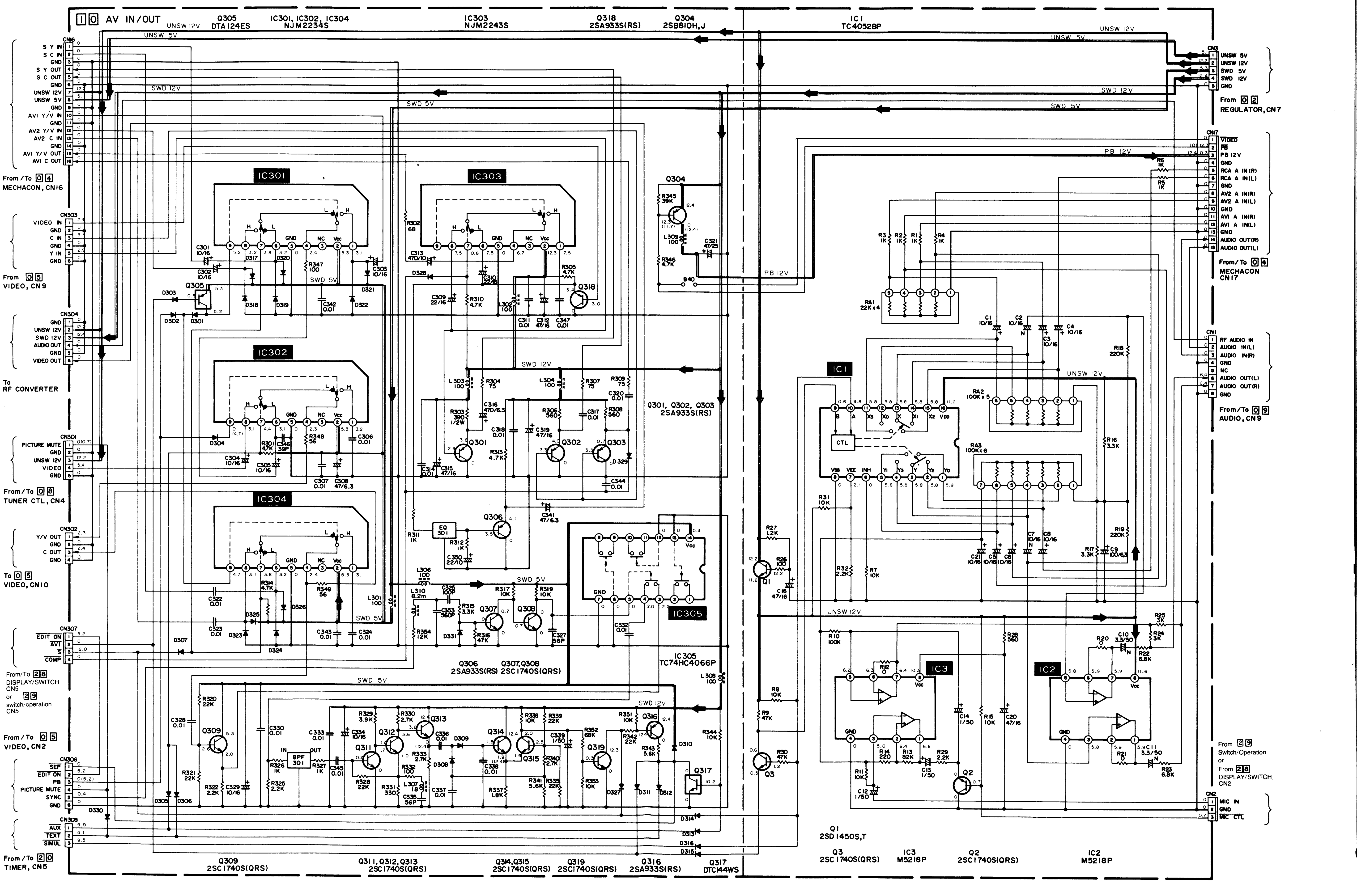


46 FLYING ERASE
Q1 2SA933S
Q2 2SC1741S(QR)
Q3 2SA933S(Q)
Q4 2SD639R
Q5 2SD639R
From 04 MECHACON CN11
REC/INS
F E CTL
CN3
From 02 REGULATOR CN5
SWD 12V
GND
CN2
FLYING ERASE HEAD(F E)
CN1
R1 47K
R2 4.7K
R3 2.2K
R4 47K
R5 18K
R6 100K
R7 120
R8 100K
R9 120
C1 0.01
C2 0.012
C3 56P
C4 82P
C5 0.01
C6 82P
C8 180P
C9 33P
D1 UZ8.2BSC
D2
L1 56
L2 3.3
L3 3.3
L4 100
T1



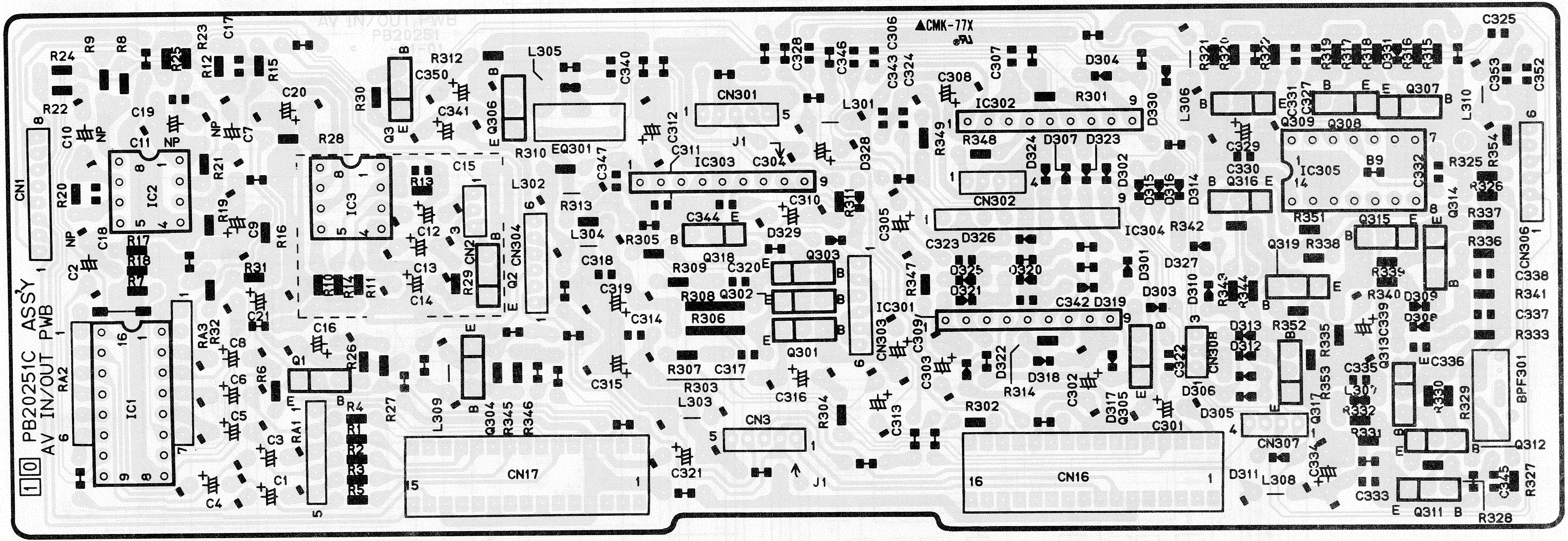
PB30092A F.E PWB ASS'Y 46
JVC D75VO
CN3
CN2
CN1
R1
R2
R3
R4
R5
R6
R7
R8
R9
C1
C2
C3
C4
C6
C8
C9
D1
D2
L1
L2
L3
L4
T1
Q1
Q2
Q3
Q4
Q5
E
B
A

Audio/Video Ein-/Ausgangsschaltung
Audio/Video IN/OUT circuit



10 AV IN/OUT
Q305 DTA124ES
IC301, IC302, IC304 NJM2234S
IC303 NJM2243S
Q318 2SA933S(RS)
Q304 2SB810H,J
IC1 TC4052BP
UNSW 12V
UNSW 5V
SWD 12V
SWD 5V
PB 12V
CN16
S Y IN
S C IN
GND
S Y OUT
S C OUT
UNSW 12V
UNSW 5V
AV1 Y/V IN
AV2 Y/V IN
AV2 C IN
AV1 Y/V OUT
AV1 C OUT
From/To 04 MECHACON, CN16
CN303
VIDEO IN
C IN
Y IN
From 05 VIDEO, CN9
CN304
SWD 12V
AUDIO OUT
VIDEO OUT
To RF CONVERTER
CN301
PICTURE MUTE
VIDEO
From/To 08 TUNER CTL, CN4
CN302
Y/V OUT
C OUT
To 05 VIDEO, CN10
CN307
EDIT ON
AV1
S
COMP
From/To 28 DISPLAY/SWITCH CN5 or 29 switch/operation CN5
From/To 05 VIDEO, CN2
CN306
SEP
EDIT ON
PB
PICTURE MUTE
SYNC
CN308
AUX
TEXT
SIMUL
From/To 20 TIMER, CN5
IC301
IC302
IC303
IC304
IC305
IC305 TC74HC4066P
EQ 301
BPF 301
Q306 2SA933S(RS)
Q307,Q308 2SC1740S(QRS)
Q301, Q302, Q303 2SA933S(RS)
Q309 2SC1740S(QRS)
Q311, Q312, Q313 2SC1740S(QRS)
Q314, Q315 2SC1740S(QRS)
Q319 2SC1740S(QRS)
Q316 2SA933S(RS)
Q317 DTC144WS
CN3
UNSW 5V
UNSW 12V
SWD 5V
SWD 12V
GND
From 02 REGULATOR, CN7
CN17
VIDEO
PB
PB 12V
RCA A IN(R)
RCA A IN(L)
AV2 A IN(R)
AV2 A IN(L)
AV1 A IN(R)
AV1 A IN(L)
AUDIO OUT(R)
AUDIO OUT(L)
From/To 04 MECHACON CN17
CN1
RF AUDIO IN
AUDIO IN(L)
AUDIO IN(R)
NC
AUDIO OUT(L)
AUDIO OUT(R)
From/To 09 AUDIO, CN9
IC1
IC2
IC3
RA1 22K×4
RA2 100K×5
RA3 100K×6
CTL
CN2
MIC IN
GND
MIC CTL
From 29 Switch/Operation or From 28 DISPLAY/SWITCH CN2
Q1 2SD1450S,T
Q3 2SC1740S(QRS)
IC3 M5218P
Q2 2SC1740S(QRS)
IC2 M5218P

Audio/Video Ein-/Ausgangsplatte
Audio/Video IN/OUT board


PB20251C ASSY
AV IN/OUT PWB
▲CMK-77X
CN1
CN2
CN3
CN16
CN17
CN301
CN302
CN303
CN304
CN306
CN307
CN308
IC1
IC2
IC3
IC301
IC302
IC303
IC304
IC305
EQ301
BPF301
J1
RA1
RA2
RA3
L301
L302
L303
L304
L305
L306
L307
L308
L309
L310
Q1
Q2
Q3
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308
Q309
Q311
Q312
Q313
Q314
Q315
Q316
Q317
Q318
Q319
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
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R17
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R31
R32
R301
R302
R303
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R353
R354
C1
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D301
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D315
D316
D317
D318
D319
D320
D321
D322
D323
D324
D325
D326
D327
D328
D329
D330
NP
B
E
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2
3
4
5
6
7
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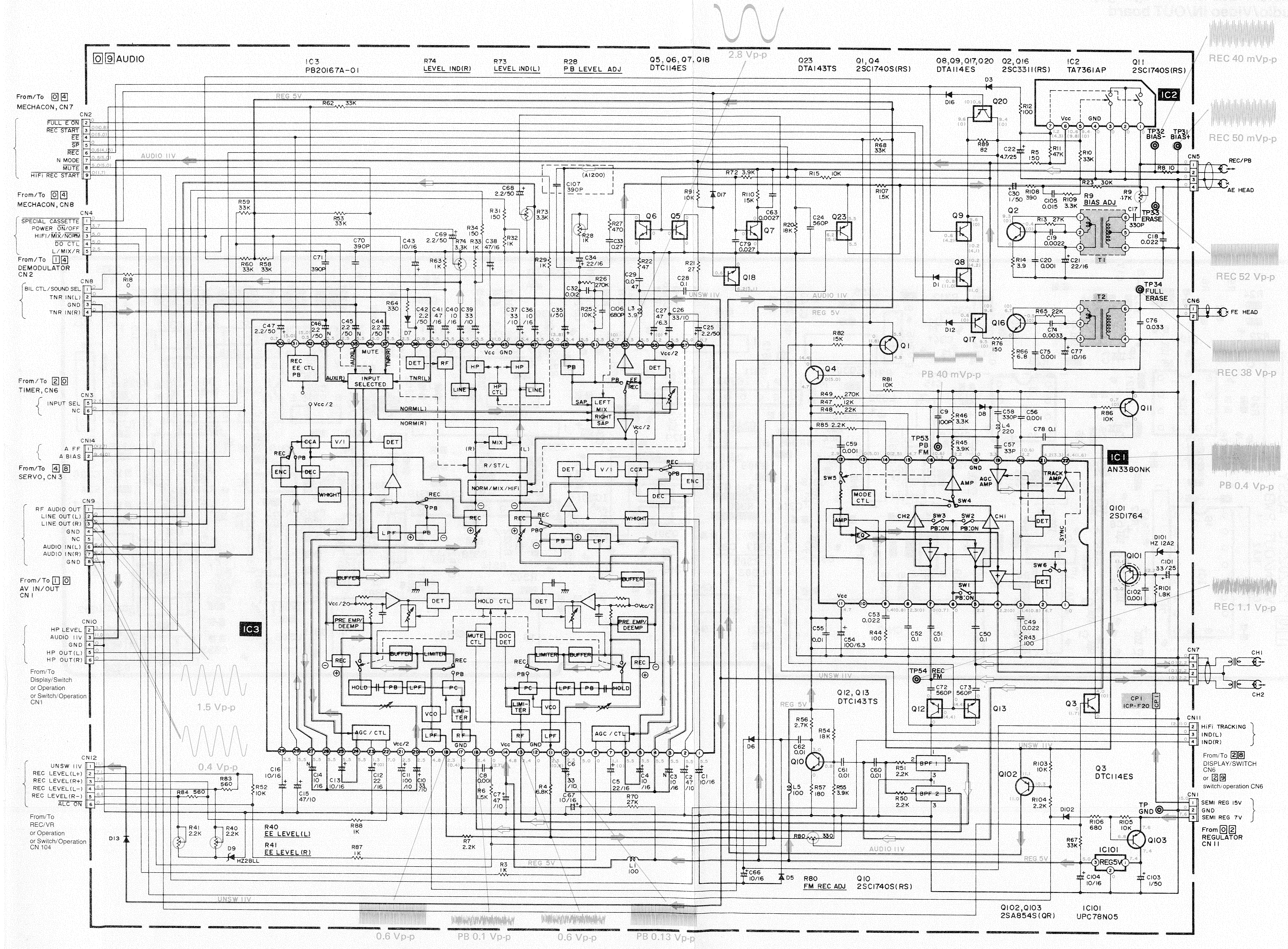
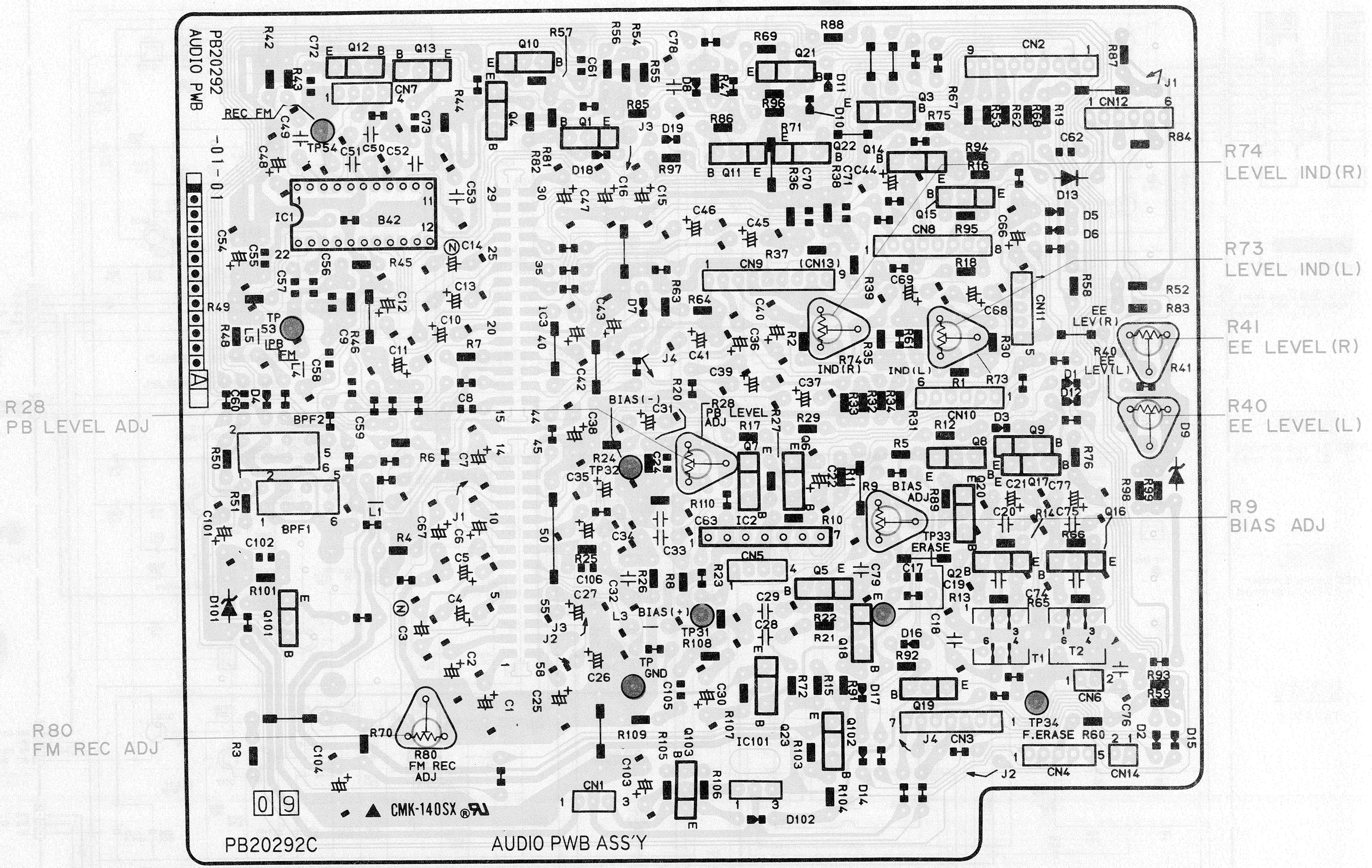
9
14
15
16

Audio



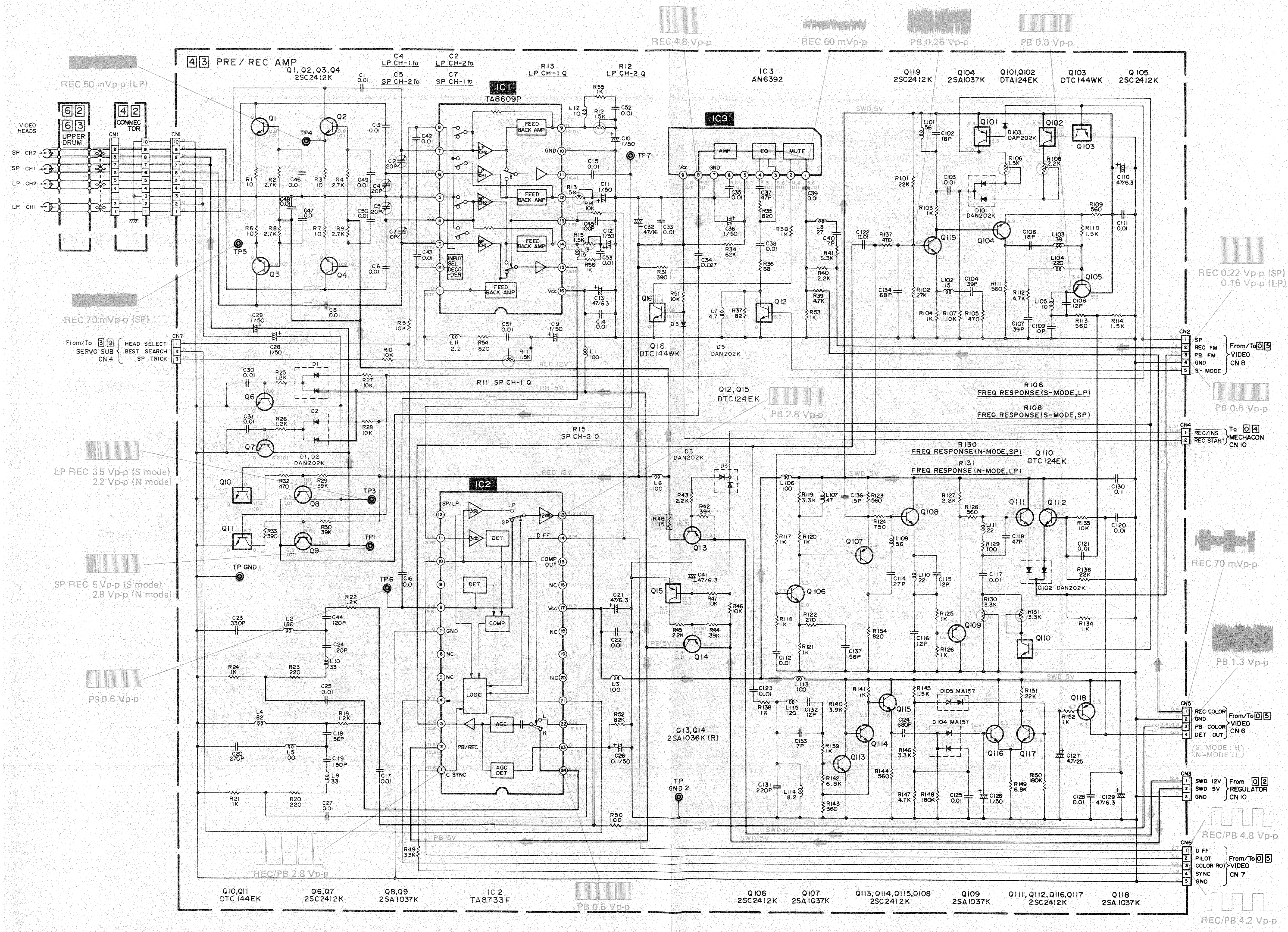
09 AUDIO
IC3 PB20167A-01
R74 LEVEL IND(R)
R73 LEVEL IND(L)
R28 PB LEVEL ADJ
Q5, Q6, Q7, Q18 DTC114ES
Q23 DTA143TS
Q1, Q4 2SC1740S(RS)
Q8, Q9, Q17, Q20 DTA114ES
Q2, Q16 2SC3311(RS)
IC2 TA7361AP
Q11 2SC1740S(RS)
From/To 04 MECHACON, CN7
CN2
FULL E ON
REC START
EE
SP
REC
N MODE
DO CTL
MUTE
HIFI REC START
From/To 04 MECHACON, CN8
CN4
SPECIAL CASSETTE
POWER ON/OFF
HIFI/MIX/NORM
DO CTL
L/MIX/R
From/To 14 DEMODULATOR CN2
CN8
BIL CTL/SOUND SEL
TNR IN(L)
GND
TNR IN(R)
From/To 20 TIMER, CN6
CN3
INPUT SEL
NC
CN14
A FF
A BIAS
From/To 48 SERVO, CN3
CN9
RF AUDIO OUT
LINE OUT(L)
LINE OUT(R)
GND
NC
AUDIO IN(L)
AUDIO IN(R)
GND
From/To 10 AV IN/OUT CN1
CN10
HP LEVEL
AUDIO 11V
GND
HP OUT(L)
HP OUT(R)
From/To Display/Switch or Operation or Switch/Operation CN1
CN12
UNSW 11V
REC LEVEL(L+)
REC LEVEL(R+)
REC LEVEL(L−)
REC LEVEL(R−)
ALC ON
From/To REC/VR or Operation or Switch/Operation CN 104
R40 EE LEVEL(L)
R41 EE LEVEL(R)
IC3
REC EE CTL PB
INPUT SELECTED
MUTE
DET
RF
HP
LINE
HP CTL
PB
LEFT MIX RIGHT SAP
SAP
NORM(L)
NORM(R)
MIX
R/ST/L
NORM/MIX/HiFi
CCA
V/I
ENC
DEC
WHIGHT
REC
LPF
BUFFER
HOLD CTL
PRE EMP/DEEMP
MUTE CTL
DOC DET
LIMITER
HOLD
PC
VCO
LIMITER
AGC/CTL
Vcc/2
GND
Vcc
AUDIO 11V
REG 5V
UNSW 11V
(A1200)
IC2
TP32 BIAS−
TP31 BIAS+
CN5
REC/PB
AE HEAD
R9 BIAS ADJ
TP33 ERASE
T1
T2
TP34 FULL ERASE
CN6
FE HEAD
IC1 AN3380NK
TP53 PB FM
AMP
AGC AMP
TRACK AMP
MODE CTL
SW1
SW2
SW3
SW4
SW5
SW6
CH1
CH2
PB:ON
EQ
SYNC
Q101 2SD1764
D101 HZ 12A2
CN7
CH1
CH2
TP54 REC FM
Q12, Q13 DTC143TS
CP1 ICP-F20
CN11
HiFi TRACKING
IND(L)
IND(R)
From/To 28 DISPLAY/SWITCH CN6 or 29 switch/operation CN6
CN1
SEMI REG 15V
GND
SEMI REG 7V
TP GND
From 02 REGULATOR CN11
Q3 DTC114ES
BPF 1
BPF 2
IC101 REG5V
R80 FM REC ADJ
Q10 2SC1740S(RS)
Q102, Q103 2SA854S(QR)
IC101 UPC78N05
D13
D9 HZ2BLL
2.8 Vp-p
REC 40 mVp-p
REC 50 mVp-p
REC 52 Vp-p
REC 38 Vp-p
PB 40 mVp-p
PB 0.4 Vp-p
REC 1.1 Vp-p
1.5 Vp-p
0.4 Vp-p
0.6 Vp-p
PB 0.1 Vp-p
0.6 Vp-p
PB 0.13 Vp-p

Audioplatte
Audio board



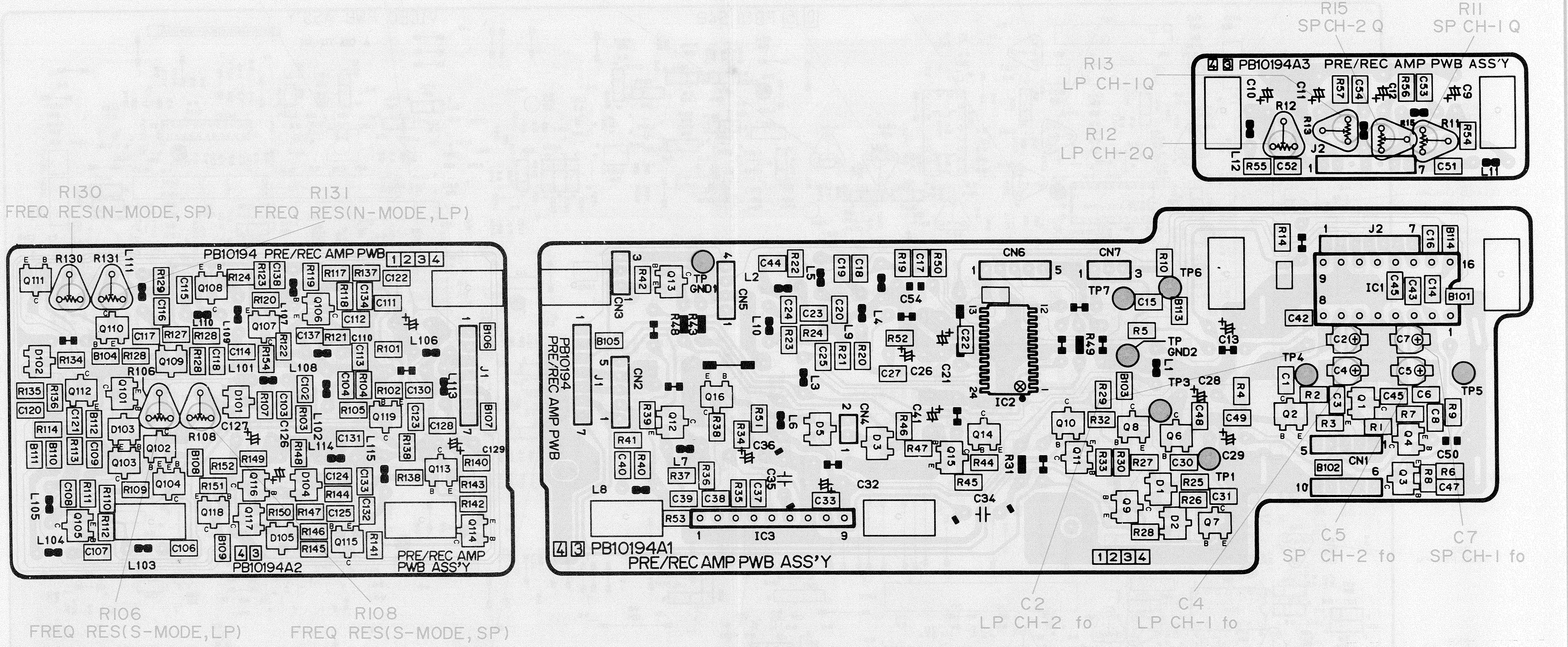
R74
LEVEL IND(R)
R73
LEVEL IND(L)
R41
EE LEVEL(R)
R40
EE LEVEL(L)
R9
BIAS ADJ
R28
PB LEVEL ADJ
R80
FM REC ADJ
PB20292
AUDIO PWB
-01-01
PB20292C
AUDIO PWB ASS'Y
CMK-140SX
09
REC FM
TP54
TP53
PB
FM
BIAS(-)
BIAS(+)
TP31
TP32
TP33
ERASE
TP
GND
TP34
F.ERASE
PB LEVEL ADJ
EE LEV(R)
EE LEV(L)
IND(R)
IND(L)
BIAS ADJ
FM REC ADJ
IC1
IC2
IC3
IC101
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8
CN9
(CN13)
CN10
CN11
CN12
CN14
BPF1
BPF2
T1
T2

Aufnahme-/Wiedergabevorverstärker
Pre/Rec amplifier

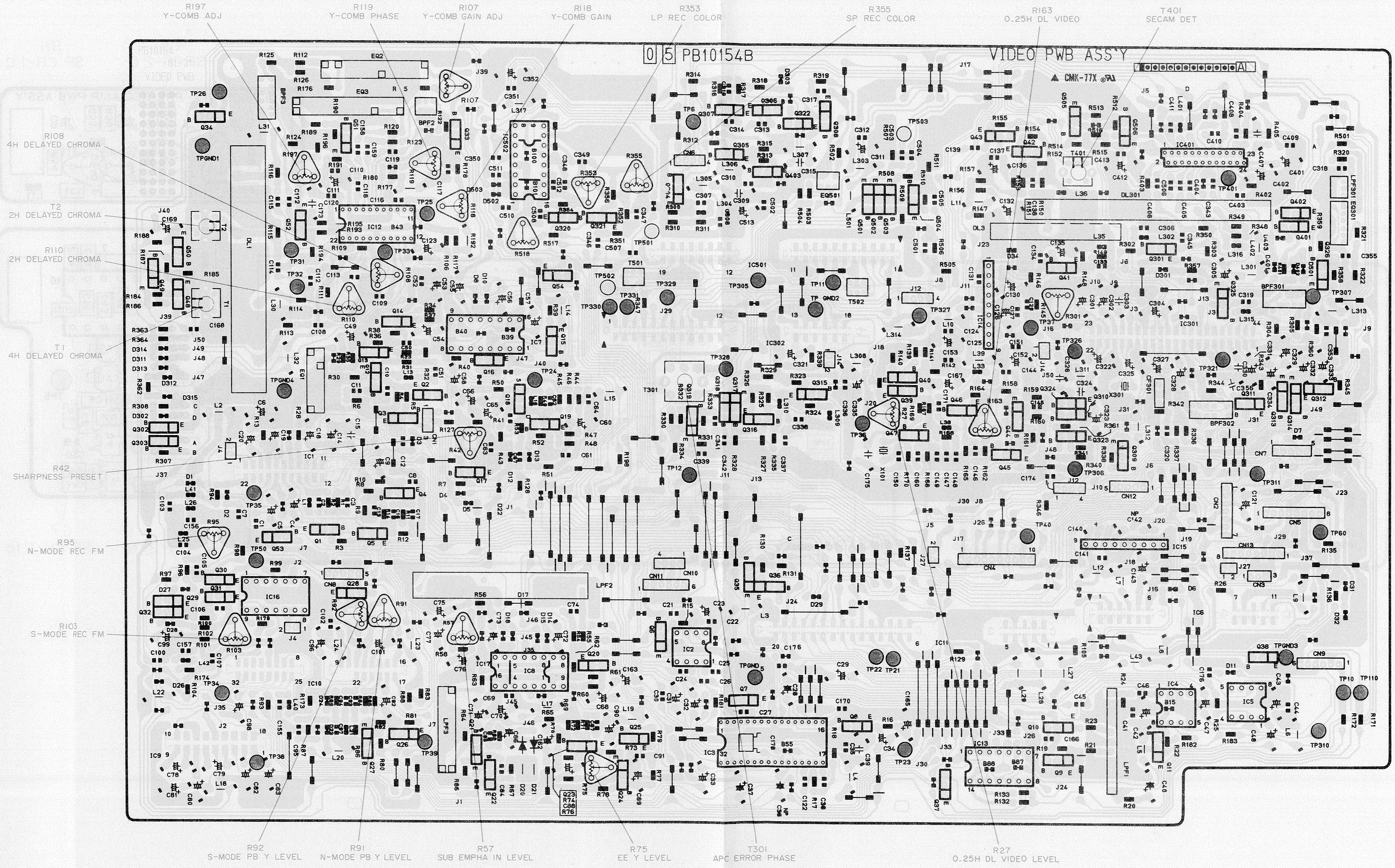


REC 4.8 Vp-p
REC 60 mVp-p
PB 0.25 Vp-p
PB 0.6 Vp-p
REC 50 mVp-p (LP)
4 3 PRE / REC AMP
Q1, Q2, Q3, Q4 2SC2412K
C4 LP CH-1 fo
C5 SP CH-2 fo
C2 LP CH-2 fo
C7 SP CH-1 fo
R13 LP CH-1 Q
R12 LP CH-2 Q
IC1 TA8609P
IC3 AN6392
Q119 2SC2412K
Q104 2SA1037K
Q101, Q102 DTA124EK
Q103 DTC144WK
Q105 2SC2412K
VIDEO HEADS
SP CH2
SP CH1
LP CH2
LP CH1
6 2
6 3
UPPER DRUM
4 2
CONNECTOR
CN1
FEED BACK AMP
INPUT SEL DECODER
AMP
EQ
MUTE
TP4
TP5
TP7
REC 70 mVp-p (SP)
From/To 3 9 SERVO SUB CN 4
HEAD SELECT
BEST SEARCH
SP TRICK
CN7
R11 SP CH-1 Q
R15 SP CH-2 Q
Q16 DTC144WK
D5 DAN202K
Q12, Q15 DTC124EK
D1, D2 DAN202K
D3 DAN202K
PB 2.8 Vp-p
REC 0.22 Vp-p (SP)
0.16 Vp-p (LP)
SP
REC FM
PB FM
GND
S-MODE
CN2
From/To 0 5 VIDEO CN 8
PB 0.6 Vp-p
R106 FREQ RESPONSE (S-MODE, LP)
R108 FREQ RESPONSE (S-MODE, SP)
R130 FREQ RESPONSE (N-MODE, SP)
R131 FREQ RESPONSE (N-MODE, LP)
Q110 DTC124EK
CN4
REC/INS
REC START
To 0 4 MECHACON CN 10
LP REC 3.5 Vp-p (S mode)
2.2 Vp-p (N mode)
TP3
TP1
TP6
TP GND 1
TP GND 2
SP REC 5 Vp-p (S mode)
2.8 Vp-p (N mode)
IC2
SP/LP
DET
D FF
COMP OUT
COMP
LOGIC
AGC
AGC DET
PB/REC
C SYNC
Q13, Q14 2SA1036K (R)
REC 70 mVp-p
PB 1.3 Vp-p
D102 DAN202K
D105 MA157
D104 MA157
CN5
REC COLOR
GND
PB COLOR
DET OUT
From/To 0 5 VIDEO CN 6
(S-MODE : H)
(N-MODE : L)
CN3
SWD 12V
SWD 5V
GND
From 0 2 REGULATOR CN 10
REC/PB 4.8 Vp-p
CN6
D FF
PILOT
COLOR ROT
SYNC
GND
From/To 0 5 VIDEO CN 7
REC/PB 4.2 Vp-p
PB 0.6 Vp-p
REC/PB 2.8 Vp-p
SWD 5V
SWD 12V
REC 12V
PB 5V
Q10, Q11 DTC144EK
Q6, Q7 2SC2412K
Q8, Q9 2SA1037K
IC 2 TA8733F
Q106 2SC2412K
Q107 2SA1037K
Q113, Q114, Q115, Q108 2SC2412K
Q109 2SA1037K
Q111, Q112, Q116, Q117 2SC2412K
Q118 2SA1037K

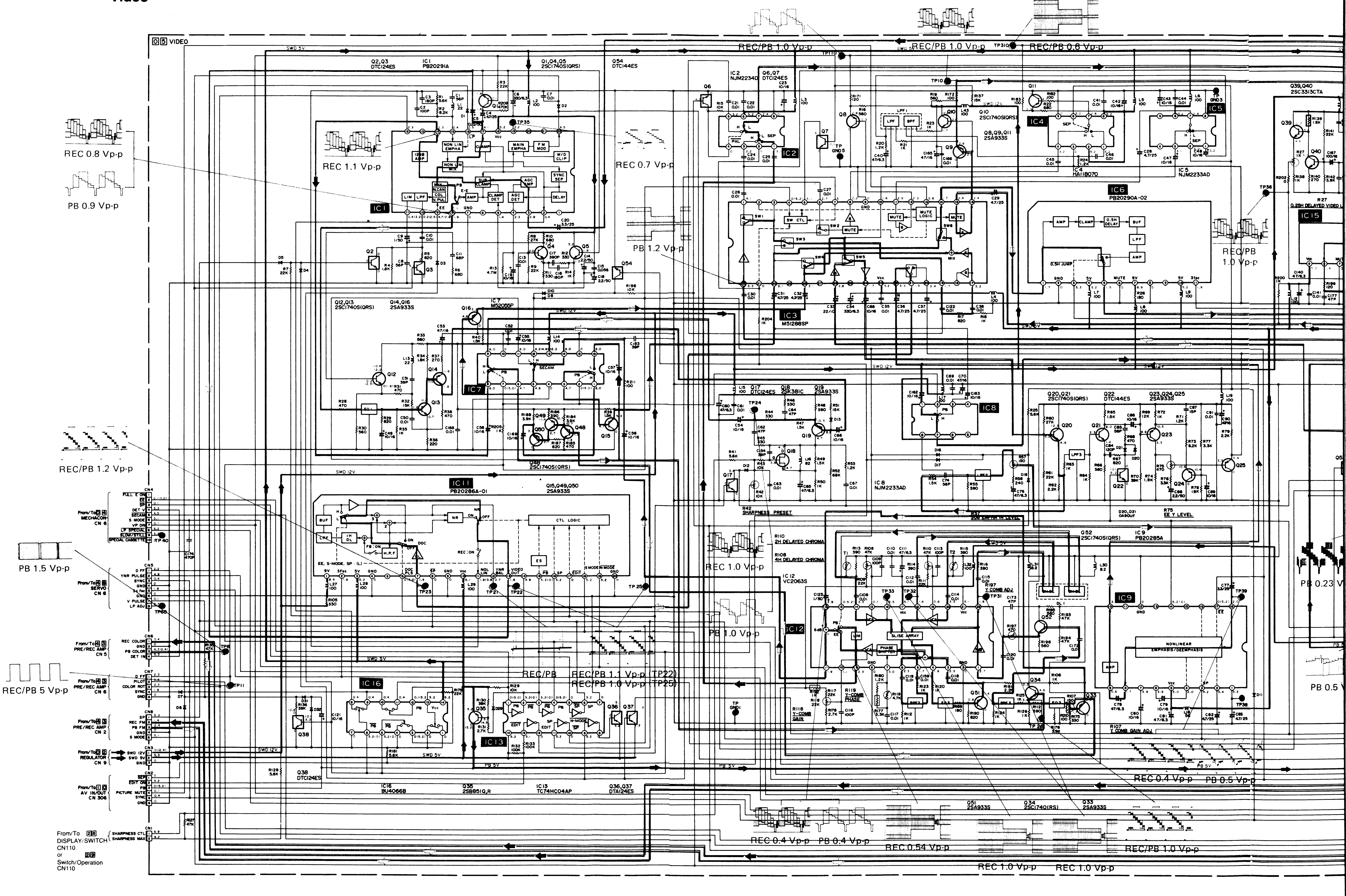
Aufnahme-/Wiedergabevorverstärkerplatte
Pre/Rec amplifier board


R15
SP CH-2 Q
R11
SP CH-1 Q
R13
LP CH-1Q
R12
LP CH-2Q
PB10194A3 PRE/REC AMP PWB ASS'Y
R130
FREQ RES(N-MODE,SP)
R131
FREQ RES(N-MODE,LP)
PB10194 PRE/REC AMP PWB
PB10194A2
PRE/REC AMP PWB ASS'Y
R106
FREQ RES(S-MODE,LP)
R108
FREQ RES(S-MODE,SP)
PB10194
PRE/REC AMP PWB
PB10194A1
PRE/REC AMP PWB ASS'Y
TP GND1
TP GND2
TP1
TP3
TP4
TP5
TP6
TP7
IC1
IC2
IC3
CN1
CN2
CN3
CN4
CN5
CN6
CN7
J1
J2
C5
SP CH-2 fo
C7
SP CH-1 fo
C2
LP CH-2 fo
C4
LP CH-1 fo

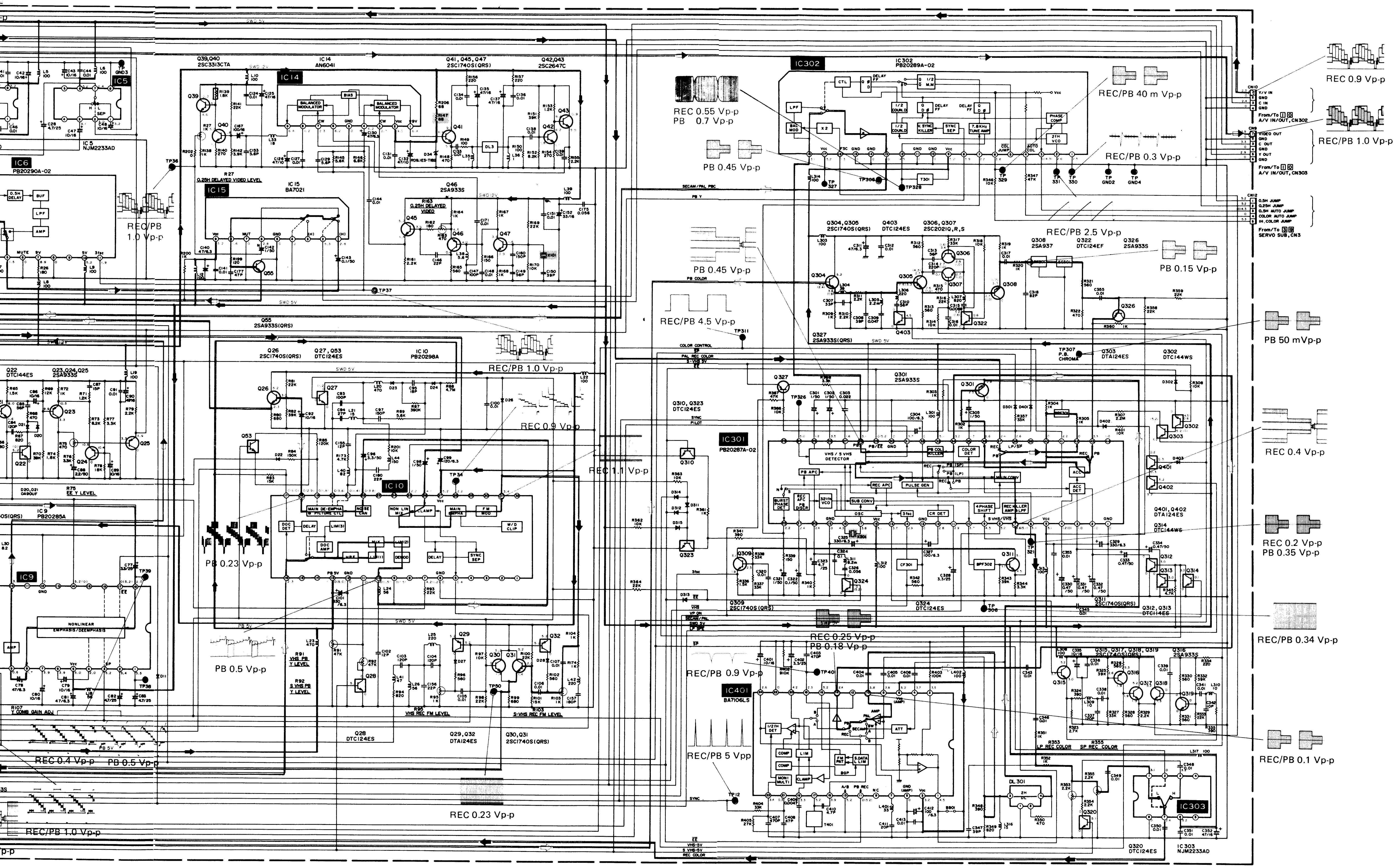
Videoplatte
Video board


R197 Y-COMB ADJ
R119 Y-COMB PHASE
R107 Y-COMB GAIN ADJ
R118 Y-COMB GAIN
R353 LP REC COLOR
R355 SP REC COLOR
R163 0.25H DL VIDEO
T401 SECAM DET
0 5 PB10154B
VIDEO PWB ASS'Y
CMK-77X
R108 4H DELAYED CHROMA
T2 2H DELAYED CHROMA
R110 2H DELAYED CHROMA
T1 4H DELAYED CHROMA
R42 SHARPNESS PRESET
R95 N-MODE REC FM
R103 S-MODE REC FM
R92 S-MODE PB Y LEVEL
R91 N-MODE PB Y LEVEL
R57 SUB EMPHA IN LEVEL
R75 EE Y LEVEL
T301 APC ERROR PHASE
R27 0.25H DL VIDEO LEVEL

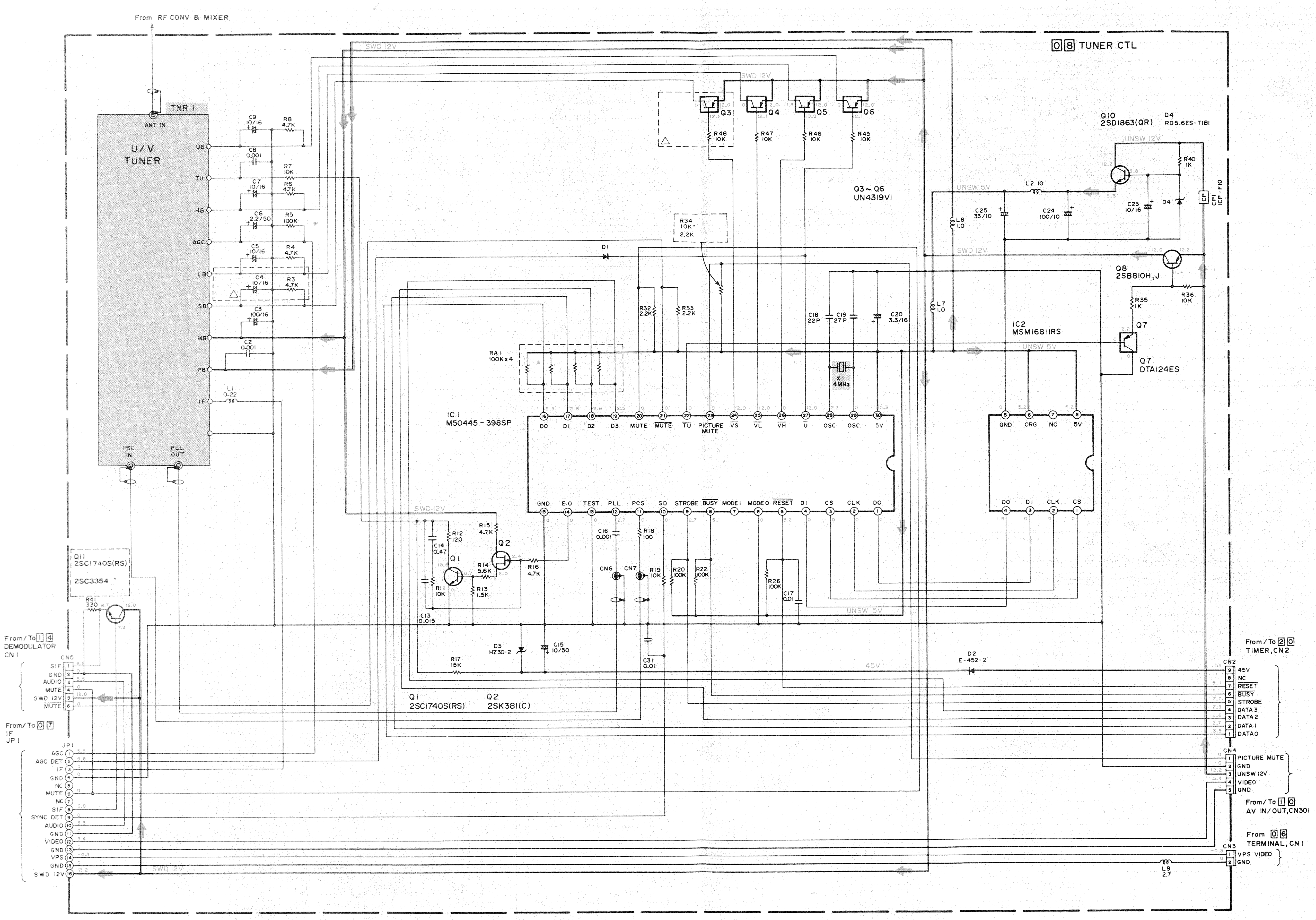
Video



05 VIDEO
REC 0.8 Vp-p
PB 0.9 Vp-p
REC 1.1 Vp-p
REC 0.7 Vp-p
PB 1.2 Vp-p
REC/PB 1.0 Vp-p
REC/PB 0.6 Vp-p
REC/PB 1.0 Vp-p
REC/PB 1.2 Vp-p
PB 1.5 Vp-p
REC/PB 5 Vp-p
REC 1.0 Vp-p
PB 1.0 Vp-p
REC/PB 1.1 Vp-p (TP22)
REC/PB 1.0 Vp-p (TP25)
PB 0.23 V
PB 0.5 V
REC 0.4 Vp-p
PB 0.5 Vp-p
REC 0.4 Vp-p
PB 0.4 Vp-p
REC 0.54 Vp-p
REC 1.0 Vp-p
REC 1.0 Vp-p
REC/PB 1.0 Vp-p
Q2,Q3 DTC124ES
IC1 PB20291A
Q1,Q4,Q5 2SC1740S(QRS)
Q54 DTC144ES
IC2 NJM2234D
Q6,Q7 DTC124ES
Q8,Q9,Q11 2SA933S
Q10 2SC1740S(QRS)
IC4 HA118070
IC5 NJM2233AD
IC6 PB20290A-02
Q39,Q40 2SC3313CTA
IC15
IC3 M51288SP
IC7 M52055P
Q12,Q13 2SC1740S(QRS)
Q14,Q16 2SA933S
Q48 2SC1740S(QRS)
IC11 PB20286A-01
Q15,Q49,Q50 2SA933S
Q17 DTC124ES
Q18 2SK381C
Q19 2SA933S
IC8 NJM2233AD
Q20,Q21 2SC1740S(QRS)
Q22 DTC144ES
Q23,Q24,Q25 2SA933S
D20,D21 OA90UF
R75 EE Y LEVEL
R42 SHARPNESS PRESET
R57 50B EMPHA IN LEVEL
R110 2H DELAYED CHROMA
R108 4H DELAYED CHROMA
IC12 VC2063S
Q52 2SC1740S(QRS)
IC9 PB20285A
R197 Y COMB ADJ
R118 Y-COMB GAIN
R119 Y-COMB PHASE
R107 Y COMB GAIN ADJ
NONLINEAR EMPHASIS/DEEMPHASIS
SLISE ARRAY
PHASE SHIFTER
IC16 BU4066B
Q35 2SB851Q,R
IC13 TC74HC04AP
Q36,Q37 DTA124ES
Q38 DTC124ES
Q51 2SA933S
Q34 2SC1740(RS)
Q33 2SA933S
From/To MECHACON CN6
From/To SERVO CN6
From/To PRE/REC AMP CN5
From/To PRE/REC AMP CN6
From/To PRE/REC AMP CN2
From/To REGULATOR CN9
From/To AV IN/OUT CN306
From/To DISPLAY/SWITCH CN110 or Switch/Operation CN110
CN4
FULL E ON
SP
DET V
SECAM
S MODE
VP ON
LP SPECIAL
SLOW/STILL
SPECIAL CASSETTE
TP40
CN5
D FF
YNR PULSE
SYNC
GND
3 fsc
GND
V PULSE
LP ADJ
TP60
CN6
REC COLOR
GND
PB COLOR
DET IN
TP8
CN7
D FF
PILOT
COLOR ROT
SYNC
GND
TP11
CN8
SP
REC FM
PB FM
GND
S MODE
CN3
SWD 12V
SWD 5V
GND
CN2
SEP
EDIT ON
PB
PICTURE MUTE
SYNC
GND
CN1
SHARPNESS CTL
SHARPNESS MAX
SWD 5V
SWD 12V
PB 5V
TP35
TP10
TP31
TP36
TP24
TP23
TP21
TP22
TP25
TP33
TP32
TP31
TP39
TP38
TP26
TP GND1
TP GND5
GND3
CTL LOGIC
NR
BUF
LPF
H DL
H.P.F
ES
MUTE LOGIC
MUTE
SW CTL
MIX
AMP
CLAMP
0.5H DELAY
0.5H JUMP
0.25H DELAYED VIDEO
NON LIN EMPHA
MAIN EMPHA
FM MOD
W/D CLIP
SYNC SEP
AGC AMP
CLAMP DET
AGC DET
DELAY
LIM
SUB CLAMP
NON LIN MIX
SEP
SECAM


IC5 NJM2233AD
IC6 PB20290A-02
Q39,Q40 2SC3313CTA
IC14 AN6041
Q41,Q45,Q47 2SC1740S(QRS)
Q42,Q43 2SC2647C
IC15 BA7021
Q46 2SA933S
0.25H DELAYED VIDEO LEVEL
BALANCED MODULATOR
REC/PB 1.0 Vp-p
Q55 2SA933S(QRS)
Q22 DTC144ES
Q23,Q24,Q25 2SA933S
Q26 2SC1740S(QRS)
Q27,Q53 DTC124ES
IC10 PB20298A
REC/PB 1.0 Vp-p
REC 0.9 Vp-p
REC 1.1 Vp-p
PB 0.23 Vp-p
IC9 PB20285A
NONLINEAR EMPHASIS/DEEMPHASIS
R107 Y COMB GAIN ADJ.
R75 EE Y LEVEL
R91 VHS PB Y LEVEL
R92 S VHS PB Y LEVEL
PB 0.5 Vp-p
R95 VHS REC FM LEVEL
R103 S-VHS REC FM LEVEL
Q28 DTC124ES
Q29,Q32 DTA124ES
Q30,Q31 2SC1740S(QRS)
REC 0.4 Vp-p
PB 0.5 Vp-p
REC/PB 1.0 Vp-p
REC 0.23 Vp-p
REC 0.55 Vp-p
PB 0.7 Vp-p
PB 0.45 Vp-p
IC302 PB20289A-02
REC/PB 40 m Vp-p
REC/PB 0.3 Vp-p
REC 0.9 Vp-p
REC/PB 1.0 Vp-p
From/To A/V IN/OUT, CN302
From/To A/V IN/OUT, CN303
From/To SERVO SUB, CN3
Q304,Q305 2SC1740S(QRS)
Q403 DTC124ES
Q306,Q307 2SC2021Q,R,S
REC/PB 2.5 Vp-p
Q308 2SA937
Q322 DTC124EF
Q326 2SA933S
PB 0.15 Vp-p
PB 0.45 Vp-p
REC/PB 4.5 Vp-p
Q327 2SA933S(QRS)
PB 50 mVp-p
TP307 P.B. CHROMA
Q303 DTA124ES
Q302 DTC144WS
Q301 2SA933S
Q310,Q323 DTC124ES
IC301 PB20287A-02
VHS / S VHS DETECTOR
REC 0.4 Vp-p
Q401,Q402 DTA124ES
Q314 DTC144WS
REC 0.2 Vp-p
PB 0.35 Vp-p
Q309 2SC1740S(QRS)
Q324 DTC124ES
Q311 2SC1740S(QRS)
Q312,Q313 DTC114ES
REC/PB 0.34 Vp-p
REC 0.25 Vp-p
PB 0.18 Vp-p
REC/PB 0.9 Vp-p
IC401 BA7106LS
Q315,Q317,Q318,Q319 2SC1740S(QRS)
Q316 2SA933S
REC/PB 5 Vpp
REC/PB 0.1 Vp-p
R353 LP REC COLOR
R355 SP REC COLOR
DL301
IC303 NJM2233AD
Q320 DTC124ES

Tuner-/Kontrollschaltung
Tuner/CTL

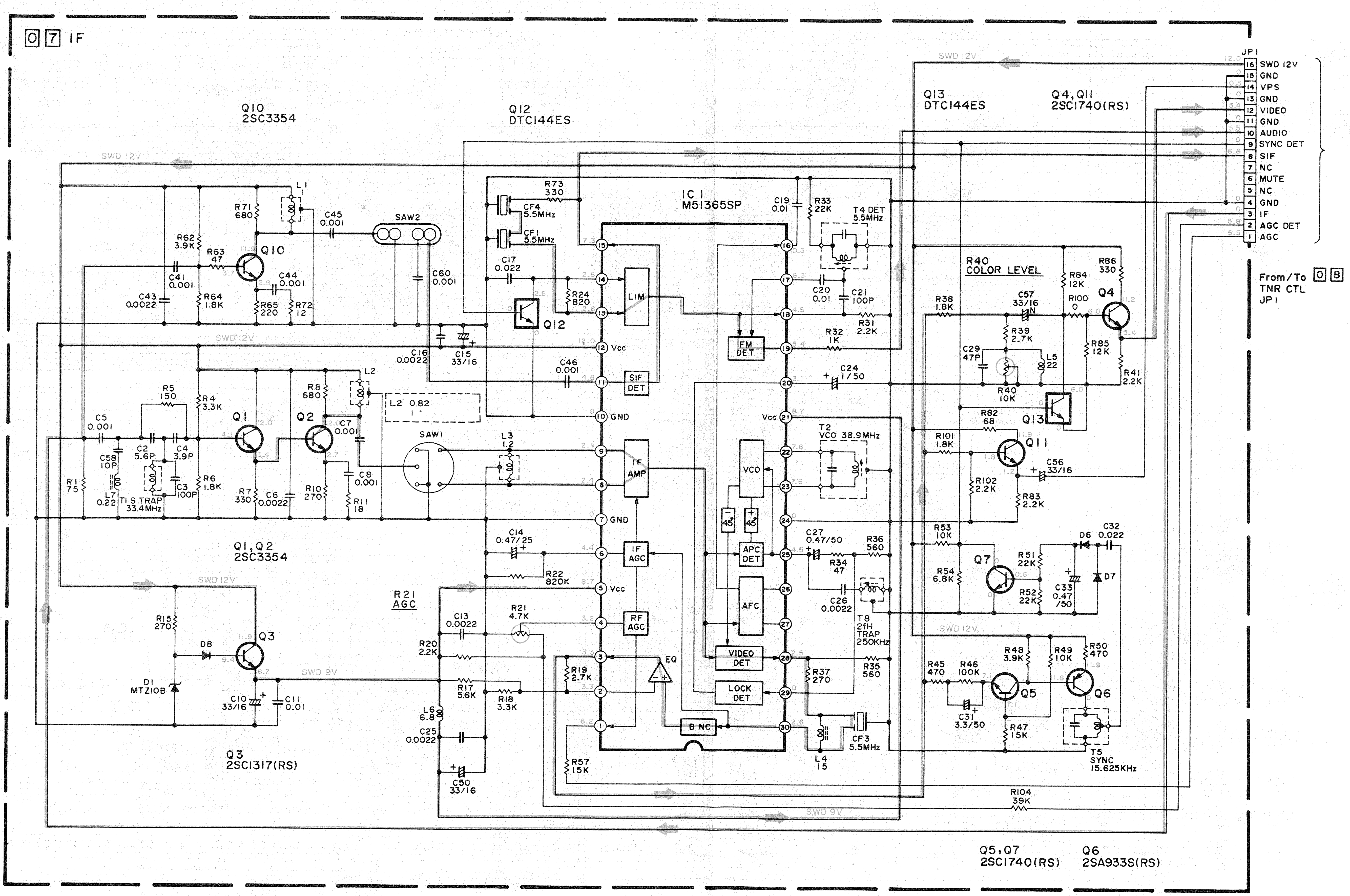

From RF CONV & MIXER
08 TUNER CTL
TNR 1
ANT IN
U/V TUNER
UB
TU
HB
AGC
LB
SB
MB
PB
IF
PSC IN
PLL OUT
C9 10/16
R8 4.7K
C8 0.001
R7 10K
C7 10/16
R6 47K
C6 2.2/50
R5 100K
C5 10/16
R4 4.7K
C4 10/16
R3 4.7K
C3 100/16
C2 0.001
L1 0.22
SWD 12V
Q3
Q4
Q5
Q6
R48 10K
R47 10K
R46 10K
R45 10K
Q3~Q6 UN4319VI
R34 10K* 2.2K
D1
R32 2.2K
R33 2.2K
C18 22P
C19 27P
C20 3.3/16
X1 4MHz
RA1 100K×4
IC1 M50445-398SP
DO DI D2 D3 MUTE MUTE TU PICTURE MUTE VS VL VH U OSC OSC 5V
GND E.O TEST PLL PCS SD STROBE BUSY MODE1 MODE0 RESET DI CS CLK DO
Q10 2SD1863(QR)
D4 RD5.6ES-TIBI
UNSW 12V
R40 1K
L2 10
UNSW 5V
C25 33/10
C24 100/10
C23 10/16
D4
CP1 ICP-F10
L8 1.0
Q8 2SB810H,J
R36 10K
R35 1K
Q7
L7 1.0
IC2 MSM16811RS
Q7 DTA124ES
GND ORG NC 5V
DO DI CLK CS
R15 4.7K
R12 120
C14 0.47
Q2
Q1
R14 5.6K
R16 4.7K
R11 10K
R13 1.5K
C13 0.015
C16 0.001
R18 100
CN6
CN7
R19 10K
R20 100K
R22 100K
R26 100K
C17 0.01
D3 HZ30-2
C15 10/50
C31 0.01
R17 15K
Q1 2SC1740S(RS)
Q2 2SK381(C)
Q11 2SC1740S(RS)
2SC3354*
R41 330
D2 E-452-2
45V
L9 2.7
From/To 14 DEMODULATOR CN1
CN5
SIF 1
GND 2
AUDIO 3
MUTE 4
SWD 12V 5
MUTE 6
From/To 07 IF JP1
JP1
AGC 1
AGC DET 2
IF 3
GND 4
NC 5
MUTE 6
NC 7
SIF 8
SYNC DET 9
AUDIO 10
GND 11
VIDEO 12
GND 13
VPS 14
GND 15
SWD 12V 16
From/To 20 TIMER,CN2
CN2
9 45V
8 NC
7 RESET
6 BUSY
5 STROBE
4 DATA3
3 DATA2
2 DATA1
1 DATA0
CN4
1 PICTURE MUTE
2 GND
3 UNSW 12V
4 VIDEO
5 GND
From/To 10 AV IN/OUT,CN301
From 06 TERMINAL,CN1
CN3
1 VPS VIDEO
2 GND

* nur beim Export Modell
Export model only

△ nicht beim Export Modell
not Export model

Note: Voltages are DC-measured with a digital voltmeter during stop and tuner mode. (3 ch)

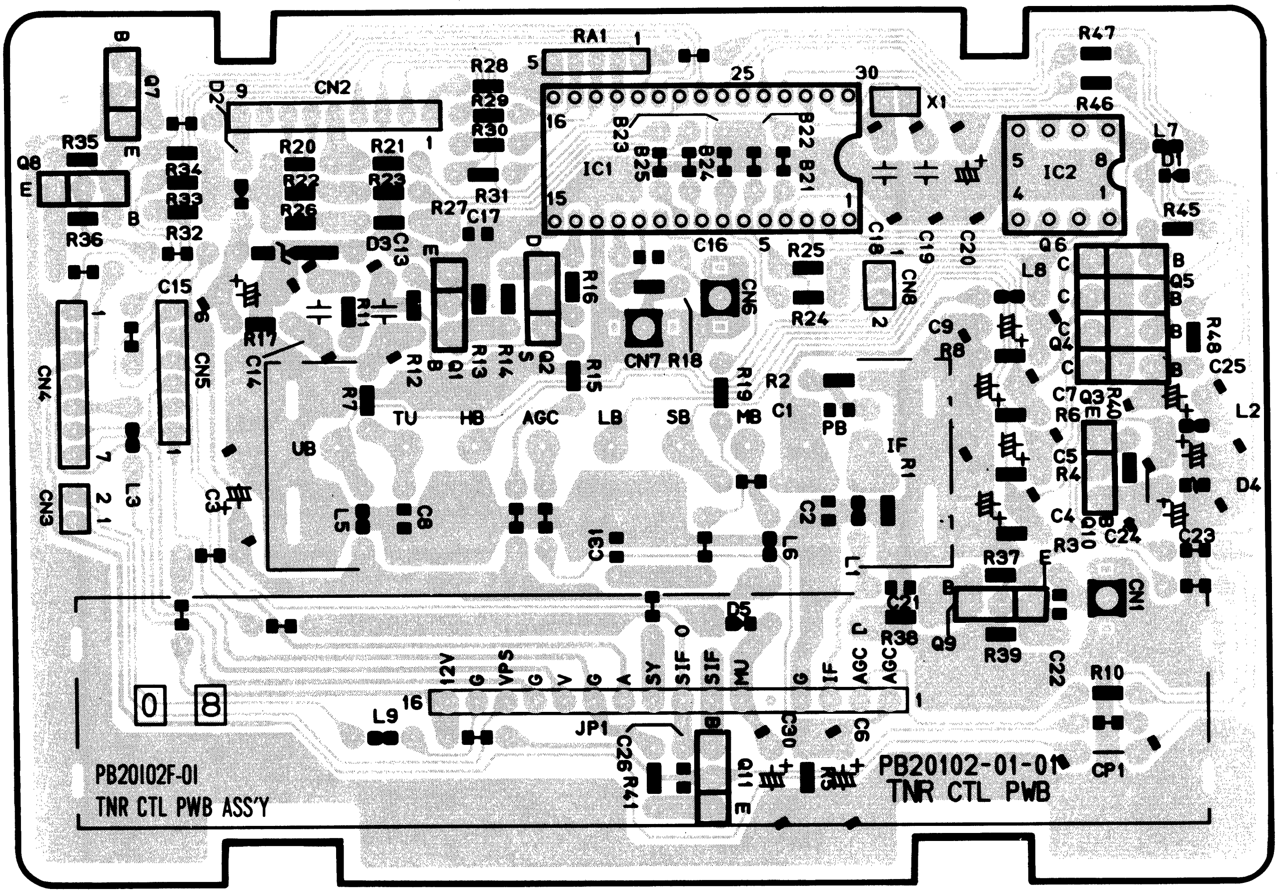
ZF Verstärker
IF amplifier



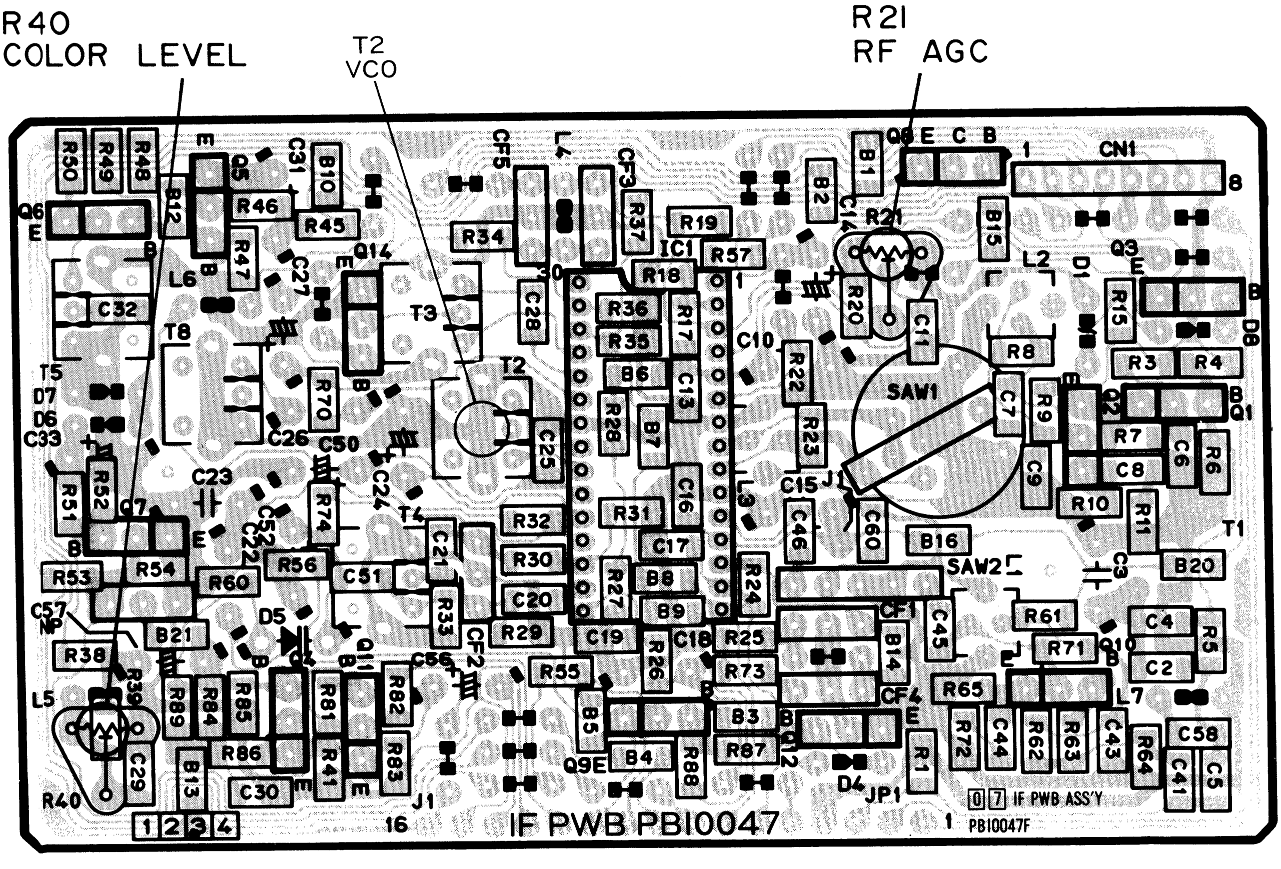
0 7 IF
Q10
2SC3354
Q12
DTC144ES
Q13
DTC144ES
Q4, Q11
2SC1740(RS)
IC1
M51365SP
SWD 12V
SWD 9V
JP1
16 SWD 12V
15 GND
14 VPS
13 GND
12 VIDEO
11 GND
10 AUDIO
9 SYNC DET
8 SIF
7 NC
6 MUTE
5 NC
4 GND
3 IF
2 AGC DET
1 AGC
From/To 0 8
TNR CTL
JP1
L1
R71 680
C45 0.001
SAW2
R62 3.9K
R63 47
C41 0.001
C43 0.0022
R64 1.8K
C44 0.001
R65 220
R72 12
C60 0.001
C16 0.0022
C15 33/16
R73 330
CF4 5.5MHz
CF1 5.5MHz
C17 0.022
R24 820
C46 0.001
C19 0.01
R33 22K
T4 DET 5.5MHz
C20 0.01
C21 100P
R31 2.2K
R32 1K
C24 1/50
LIM
FM DET
SIF DET
IF AMP
IF AGC
RF AGC
VCO
APC DET
AFC
VIDEO DET
LOCK DET
B NC
EQ
Vcc
GND
T2 VCO 38.9MHz
C27 0.47/50
R36 560
R34 47
C26 0.0022
T8 2fH TRAP 250KHz
R37 270
R35 560
CF3 5.5MHz
L4 15
R40 COLOR LEVEL
R84 12K
R86 330
C57 33/16
R100 0
R38 1.8K
R39 2.7K
C29 47P
L5 22
R85 12K
R41 2.2K
R40 10K
R82 68
R101 1.8K
C56 33/16
R102 2.2K
R83 2.2K
R53 10K
C32 0.022
D6
D7
Q7
R51 22K
R54 6.8K
C33 0.47/50
R52 22K
R48 3.9K
R49 10K
R50 470
R45 470
R46 100K
C31 3.3/50
R47 15K
T5 SYNC 15.625KHz
R104 39K
Q5
Q6
Q5, Q7
2SC1740(RS)
Q6
2SA933S(RS)
L2
R5 150
R4 3.3K
R8 680
L2 0.82
C5 0.001
C58 10P
C2 5.6P
C4 3.9P
C7 0.001
R1 75
L7 0.22
T1 S.TRAP 33.4MHz
C3 100P
R6 1.8K
R7 330
C6 0.0022
R10 270
C8 0.001
R11 18
SAW1
L3 1.2
Q1
Q2
Q1, Q2
2SC3354
C14 0.47/25
R22 820K
R21 AGC
C13 0.0022
R21 4.7K
R20 2.2K
R17 5.6K
R18 3.3K
R19 2.7K
L6 6.8
C25 0.0022
C50 33/16
R57 15K
R15 270
D8
Q3
D1 MTZ10B
C10 33/16
C11 0.01
Q3
2SC1317(RS)

Note: Voltages are DC-measured with a digital voltmeter during stop and tuner mode. (3 ch)

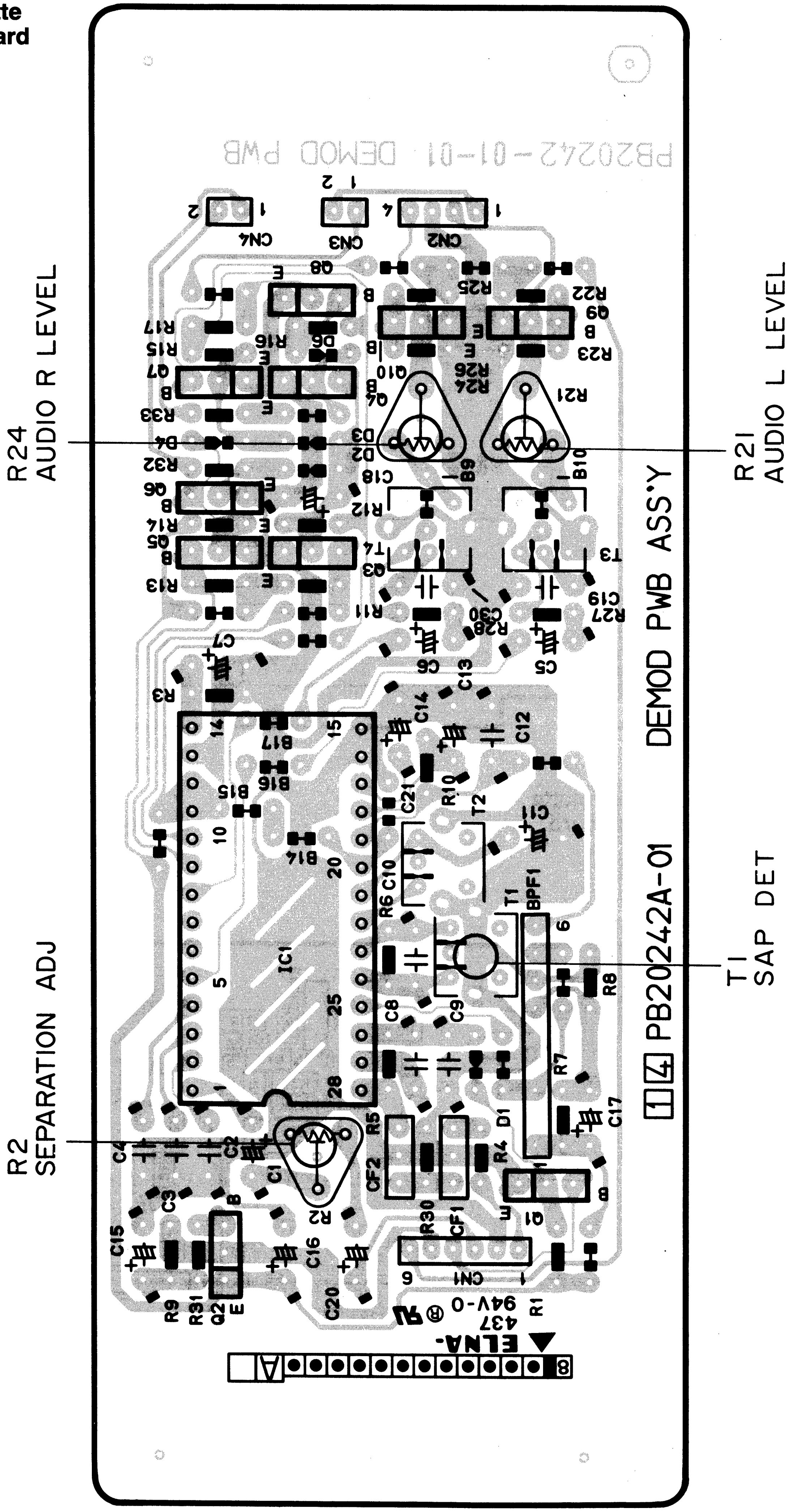
Tunerplatte
Tuner/CTL board


PB20102F-01
TNR CTL PWB ASS'Y
PB20102-01-01
TNR CTL PWB
IC1
IC2
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8
JP1
X1
RA1
UB
TU
HB
AGC
LB
SB
MB
PB
IF
12V
G
VPS
SY
SIF 0
SIF
MU
CP1

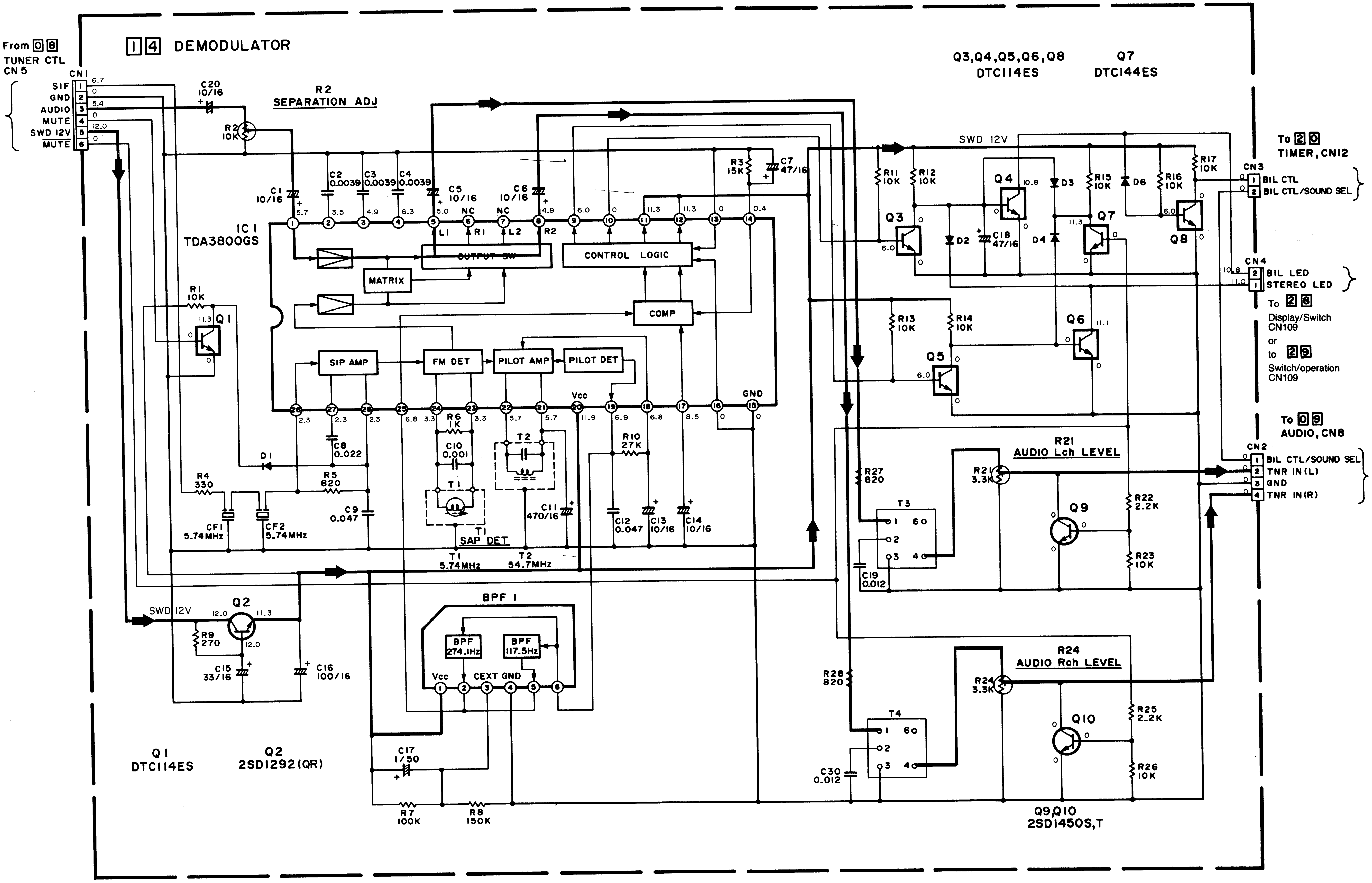
ZF Verstärkerplatte
IF amplifier board


R40
COLOR LEVEL
T2
VCO
R21
RF AGC
IF PWB PB10047
IF PWB ASS'Y
PB10047F
IC1
SAW1
SAW2
CN1
CF1
CF2
CF3
CF4
CF5
JP1
J1
T1
T2
T3
T4
T5
T8
1 2 3 4

Demodulatorplatte
Demodulator board

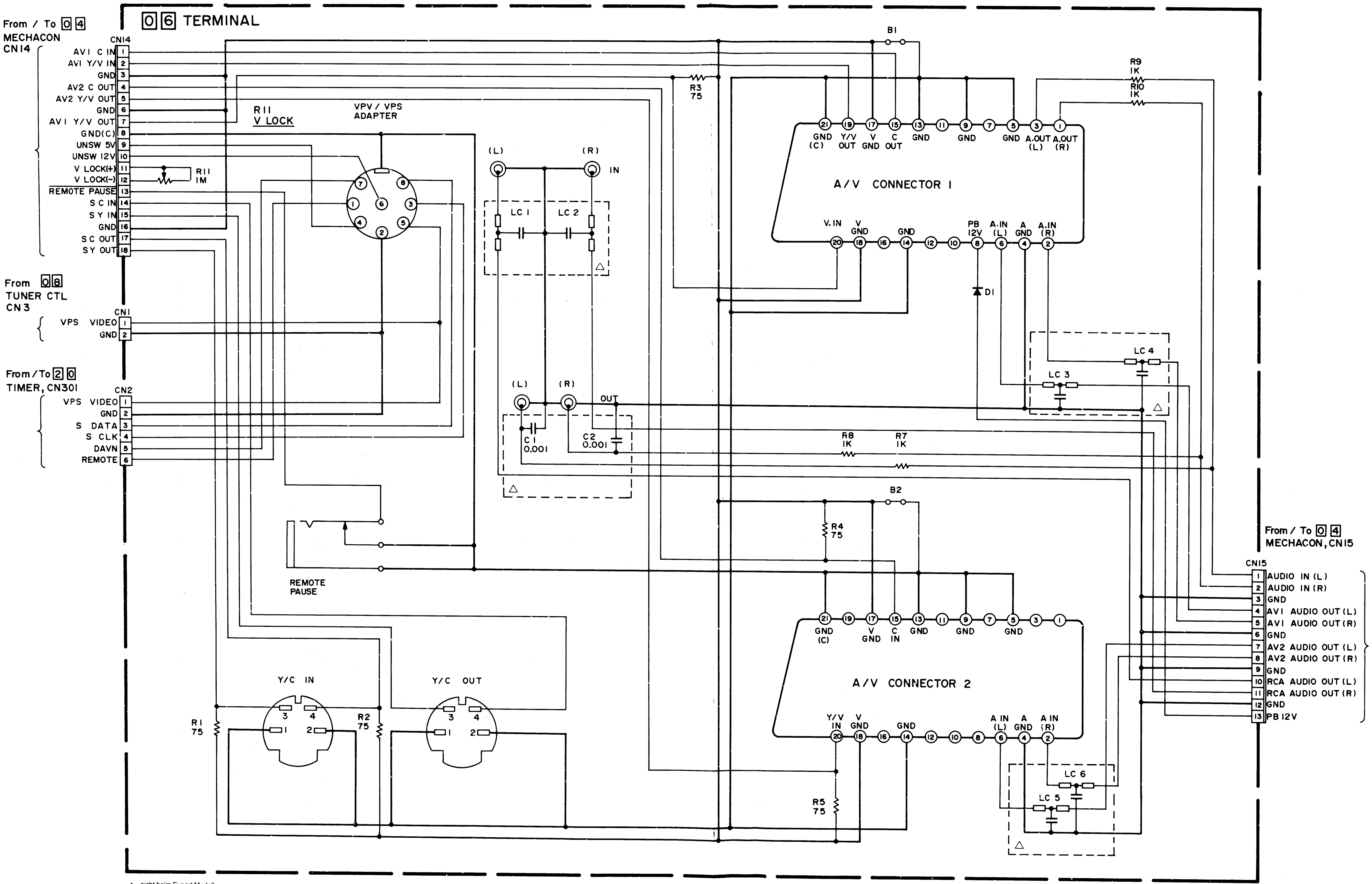

R24
AUDIO R LEVEL
R21
AUDIO L LEVEL
R2
SEPARATION ADJ
T1
SAP DET
DEMOD PWB ASS'Y
PB20242A-01
PB20242-01-01 DEMOD PWB
CN1
CN2
CN3
CN4
IC1
ELNA
94V-0
437

Demodulator


From 08
TUNER CTL
CN5
CN1
SIF 1
GND 2
AUDIO 3
MUTE 4
SWD 12V 5
MUTE 6
14 DEMODULATOR
C20 10/16
R2
SEPARATION ADJ
R2 10K
C1 10/16
C2 0.0039
C3 0.0039
C4 0.0039
C5 10/16
C6 10/16
IC1
TDA3800GS
L1
R1
L2
R2
NC
NC
OUTPUT SW
MATRIX
CONTROL LOGIC
COMP
SIP AMP
FM DET
PILOT AMP
PILOT DET
Vcc
GND
R3 15K
C7 47/16
R1 10K
Q1
D1
R4 330
R5 820
CF1 5.74MHz
CF2 5.74MHz
C8 0.022
C9 0.047
R6 1K
C10 0.001
T1
T2
T1 SAP DET
T1 5.74MHz
T2 54.7MHz
C11 470/16
R10 27K
C12 0.047
C13 10/16
C14 10/16
BPF 1
BPF 274.1Hz
BPF 117.5Hz
Vcc
CEXT GND
SWD 12V
Q2
R9 270
C15 33/16
C16 100/16
C17 1/50
R7 100K
R8 150K
Q1 DTC114ES
Q2 2SD1292(QR)
Q3,Q4,Q5,Q6,Q8 DTC114ES
Q7 DTC144ES
SWD 12V
R11 10K
R12 10K
Q3
Q4
D2
C18 47/16
D3
D4
R15 10K
Q7
D6
R16 10K
R17 10K
Q8
R13 10K
R14 10K
Q5
Q6
To 20 TIMER, CN12
CN3
1 BIL CTL
2 BIL CTL/SOUND SEL
CN4
2 BIL LED
1 STEREO LED
To 28 Display/Switch CN109 or to 29 Switch/operation CN109
To 09 AUDIO, CN8
CN2
1 BIL CTL/SOUND SEL
2 TNR IN(L)
3 GND
4 TNR IN(R)
R21 AUDIO Lch LEVEL
R21 3.3K
R22 2.2K
R23 10K
Q9
R27 820
T3
C19 0.012
R24 AUDIO Rch LEVEL
R24 3.3K
R25 2.2K
R26 10K
Q10
R28 820
T4
C30 0.012
Q9,Q10 2SD1450S,T

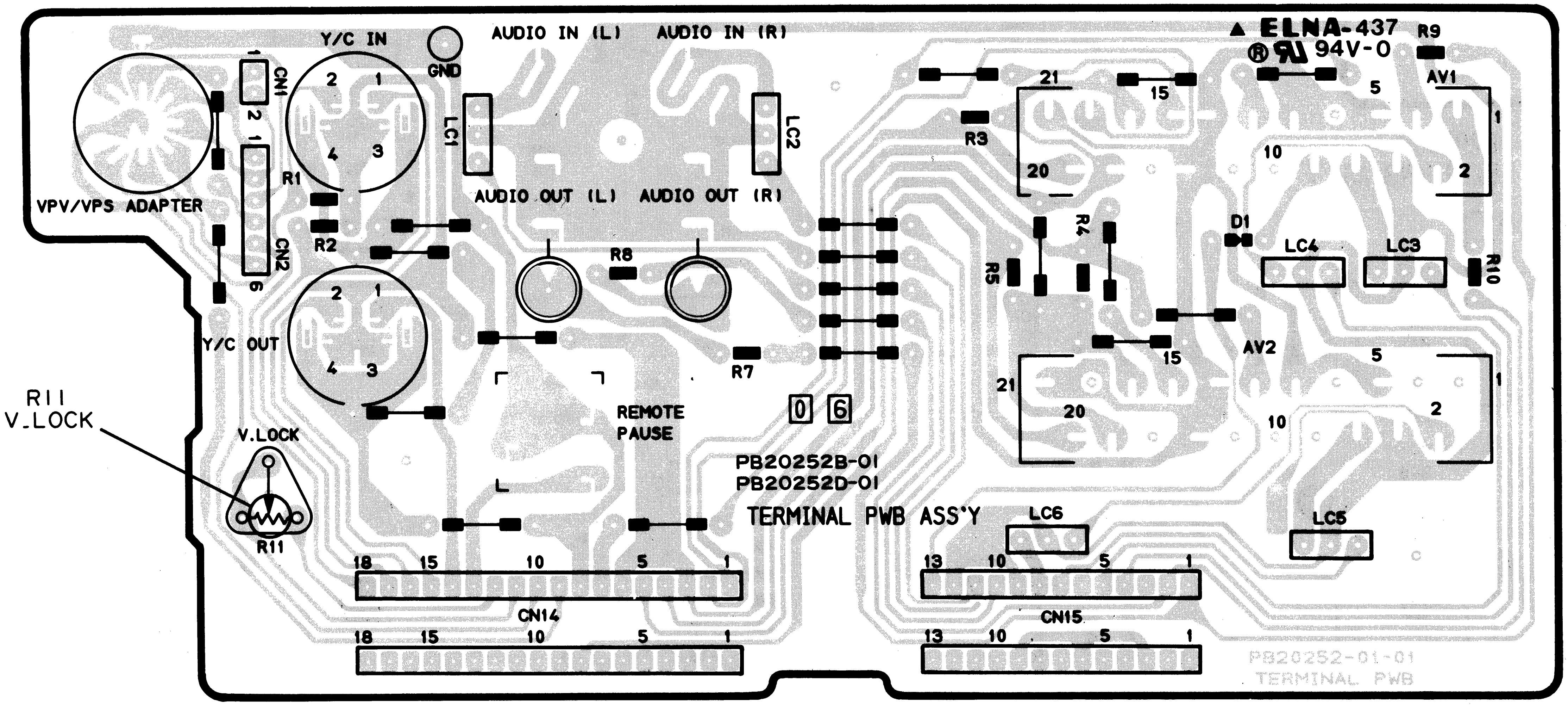
Note: Voltages are DC-measured with a digital voltmeter during stop and tuner mode. (3 ch)

Anschlußplatte Schaltung
Terminal circuit

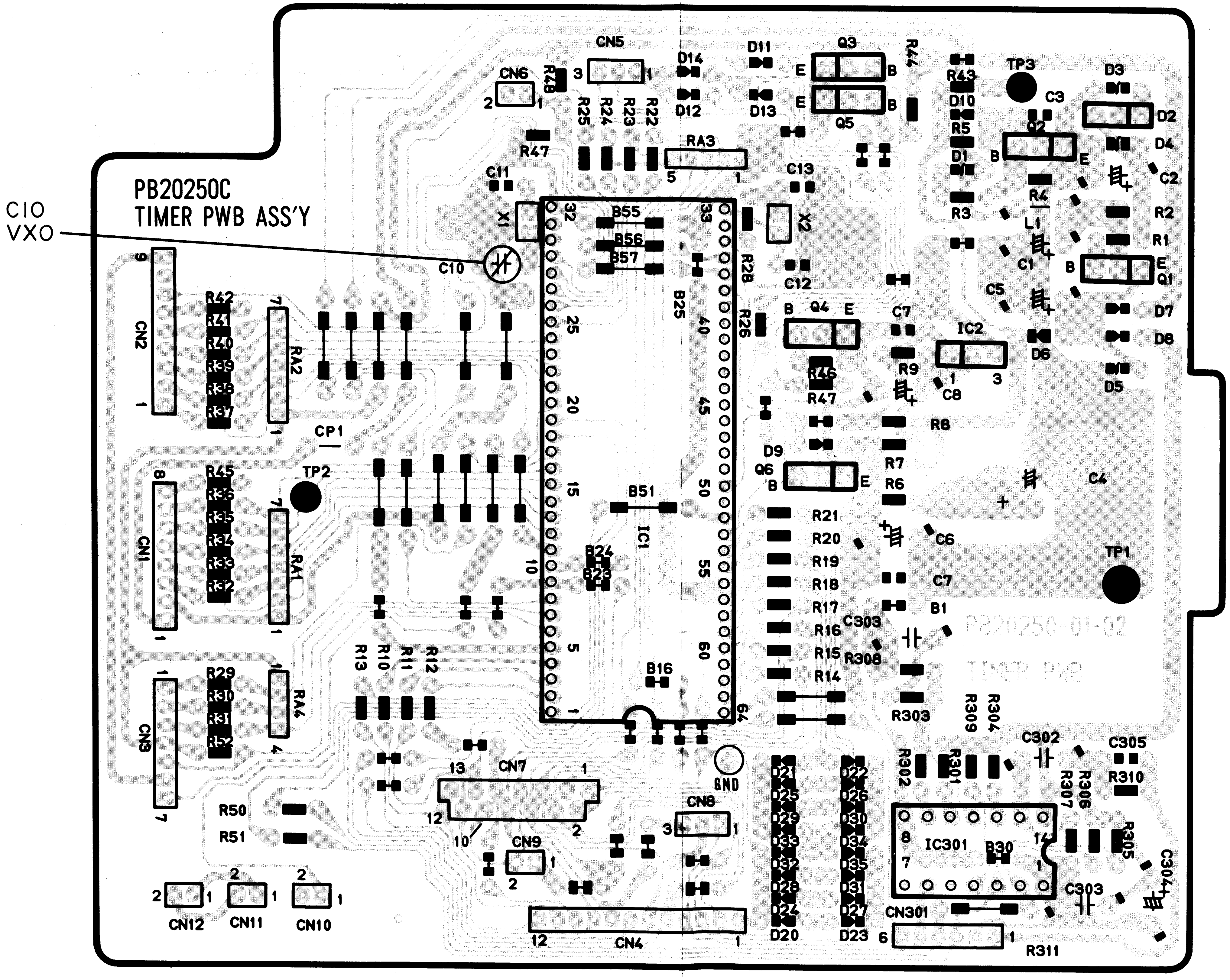

06 TERMINAL
From / To 04
MECHACON
CN14
CN14
AV1 C IN 1
AV1 Y/V IN 2
GND 3
AV2 C OUT 4
AV2 Y/V OUT 5
GND 6
AV1 Y/V OUT 7
GND(C) 8
UNSW 5V 9
UNSW 12V 10
V LOCK(+) 11
V LOCK(-) 12
REMOTE PAUSE 13
S C IN 14
S Y IN 15
GND 16
S C OUT 17
S Y OUT 18
R11
1M
R11
V LOCK
VPV / VPS
ADAPTER
From 08
TUNER CTL
CN3
CN1
VPS VIDEO 1
GND 2
From / To 20
TIMER, CN301
CN2
VPS VIDEO 1
GND 2
S DATA 3
S CLK 4
DAVN 5
REMOTE 6
(L)
(R)
IN
LC1
LC2
(L)
(R)
OUT
C1
0.001
C2
0.001
R8
1K
R7
1K
B1
R3
75
R9
1K
R10
1K
GND (C)
Y/V OUT
V GND
C OUT
GND
GND
GND
A.OUT (L)
A.OUT (R)
A/V CONNECTOR 1
V.IN
V GND
GND
PB 12V
A.IN (L)
A GND
A.IN (R)
D1
LC3
LC4
B2
R4
75
REMOTE
PAUSE
GND (C)
V GND
C IN
GND
GND
GND
A/V CONNECTOR 2
Y/V IN
V GND
GND
A IN (L)
A GND
A IN (R)
LC5
LC6
R5
75
Y/C IN
Y/C OUT
R1
75
R2
75
From / To 04
MECHACON, CN15
CN15
1 AUDIO IN (L)
2 AUDIO IN (R)
3 GND
4 AV1 AUDIO OUT (L)
5 AV1 AUDIO OUT (R)
6 GND
7 AV2 AUDIO OUT (L)
8 AV2 AUDIO OUT (R)
9 GND
10 RCA AUDIO OUT (L)
11 RCA AUDIO OUT (R)
12 GND
13 PB 12V

△ nicht beim Export Modell
not Export model

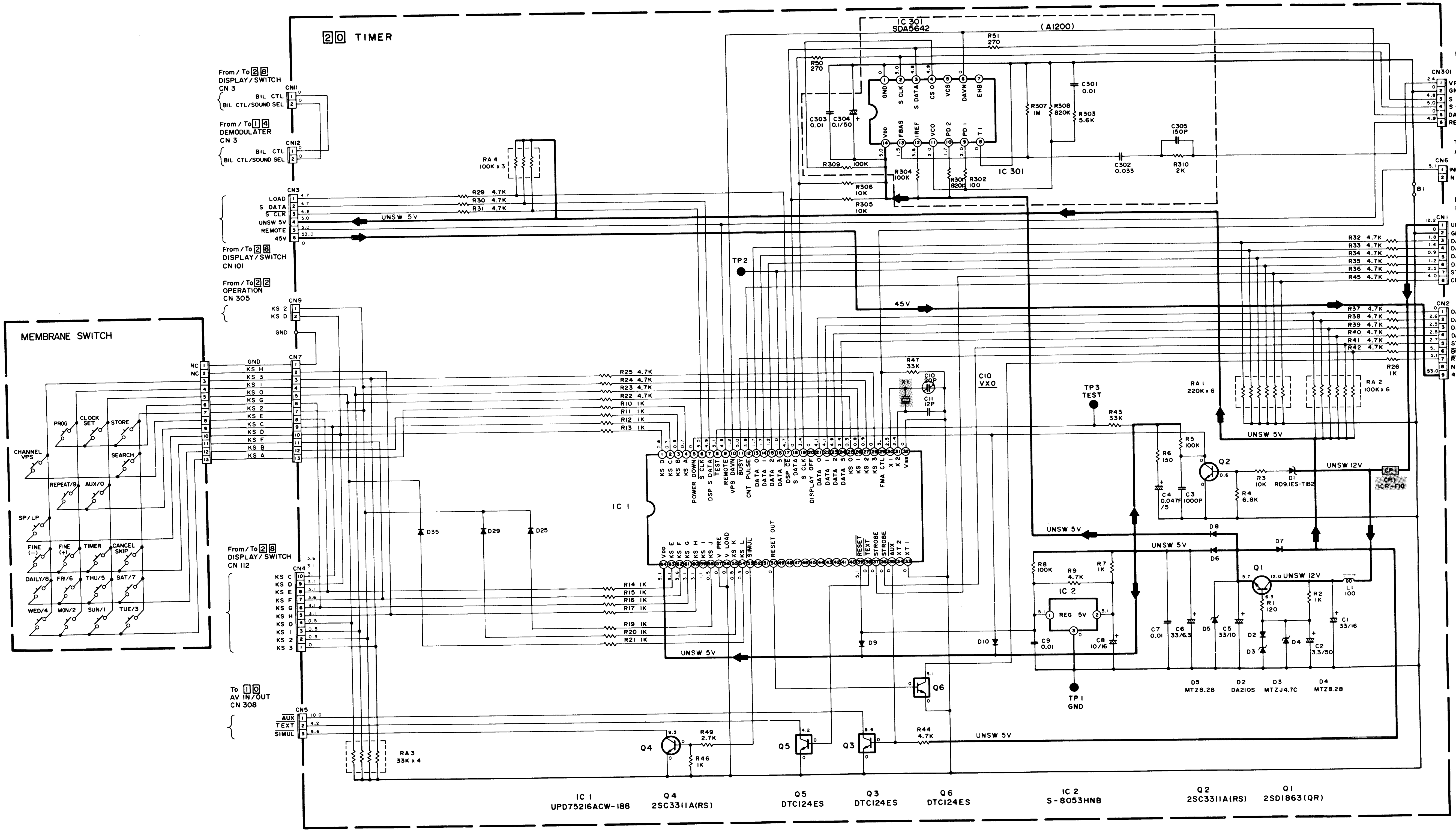
Anschlußplatte
Terminal board


Y/C IN
GND
AUDIO IN (L)
AUDIO IN (R)
▲ ELNA-437
94V-0
R9
AV1
CN1
LC1
LC2
R3
R1
R2
VPV/VPS ADAPTER
CN2
AUDIO OUT (L)
AUDIO OUT (R)
R8
R4
R5
D1
LC4
LC3
R10
Y/C OUT
R7
AV2
R11
V.LOCK
V.LOCK
REMOTE
PAUSE
0 6
PB20252B-01
PB20252D-01
TERMINAL PWB ASS'Y
LC6
LC5
R11
CN14
CN15
PB20252-01-01
TERMINAL PWB

Timerplatte
Timer board

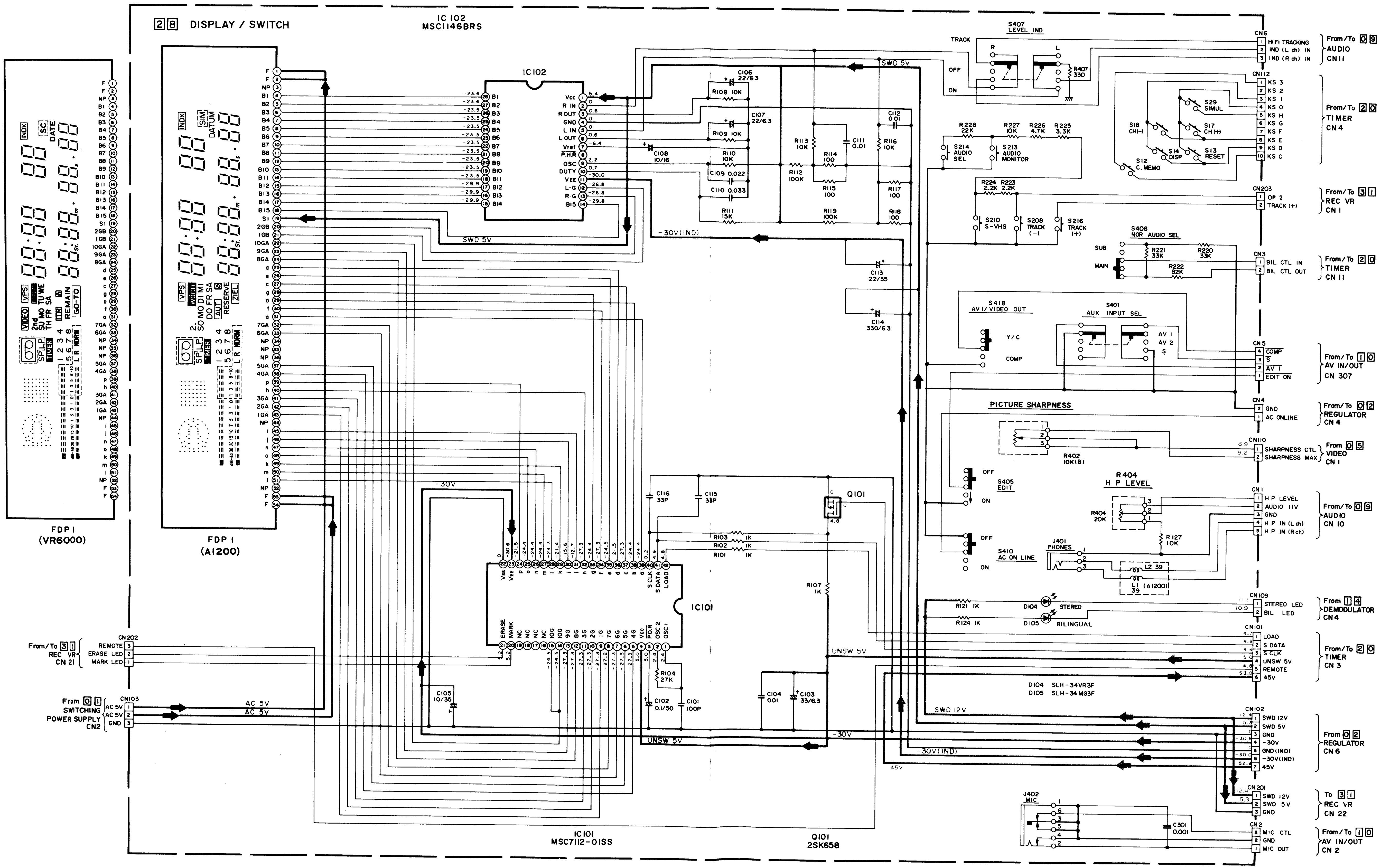

C10
VXO
PB20250C
TIMER PWB ASS'Y
PB20250-01-02
TIMER PWB
IC1
IC2
IC301
X1
X2
C10
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8
CN9
CN10
CN11
CN12
CN301
RA1
RA2
RA3
RA4
TP1
TP2
TP3
CP1
GND
Q1
Q2
Q3
Q4
Q5
Q6
L1
C1
C2
C3
C4
C5
C6
C7
C8
C11
C12
C13
C302
C303
C304
C305
D1
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D20
D23
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R28
R29
R30
R31
R32
R33
R34
R35
R36
R37
R38
R39
R40
R41
R42
R43
R44
R45
R46
R47
R48
R50
R51
R301
R302
R303
R304
R305
R306
R307
R308
R309
R310
R311
B1
B16
B23
B24
B25
B30
B51
B55
B56
B57
B
E
1
5
10
15
20
25
32
33
40
45
50
55
60
64

Timer und Membranschalter
Timer and Membrane switch


20 TIMER
MEMBRANE SWITCH
IC 301 SDA5642
(A1200)
IC 1
IC 2
REG 5V
From/To 28 DISPLAY/SWITCH CN 3
From/To 14 DEMODULATER CN 3
From/To 28 DISPLAY/SWITCH CN 101
From/To 22 OPERATION CN 305
From/To 28 DISPLAY/SWITCH CN 112
To 10 AV IN/OUT CN 308
From/To 06 TERMINAL, CN2
To 09 AUDIO, CN3
From/To 04 MECHACON, CN3
From/To 08 TUNER CTL, CN2
CN11
CN12
CN3
CN9
CN7
CN4
CN5
CN301
CN6
CN1
CN2
BIL CTL
BIL CTL/SOUND SEL
LOAD
S DATA
S CLK
UNSW 5V
REMOTE
45V
KS 2
KS D
GND
KS H
KS 3
KS 1
KS 0
KS G
KS E
KS C
KS F
KS B
KS A
AUX
TEXT
SIMUL
VPS VIDEO
DAVN
INPUT SEL
NC
UNSW 12V
DATA 0
DATA 1
DATA 2
DATA 3
STROBE
CNT PULSE
BUSY
RESET
PROG
CLOCK SET
STORE
CHANNEL VPS
SEARCH
REPEAT/9
AUX/0
SP/LP
FINE (−)
FINE (+)
TIMER
CANCEL SKIP
DAILY/8
FRI/6
THU/5
SAT/7
WED/4
MON/2
SUN/1
TUE/3
RA 4 100K x 3
RA 3 33K x 4
RA 1 220K x 6
RA 2 100K x 6
R29 4.7K
R30 4.7K
R31 4.7K
R25 4.7K
R24 4.7K
R23 4.7K
R22 4.7K
R10 1K
R11 1K
R12 1K
R13 1K
R14 1K
R15 1K
R16 1K
R17 1K
R19 1K
R20 1K
R21 1K
R32 4.7K
R33 4.7K
R34 4.7K
R35 4.7K
R36 4.7K
R45 4.7K
R37 4.7K
R38 4.7K
R39 4.7K
R40 4.7K
R41 4.7K
R42 4.7K
R26 1K
R47 33K
R43 33K
R44 4.7K
R46 1K
R49 2.7K
R50 270
R51 270
R305 10K
R306 10K
R307 1M
R308 820K
R303 5.6K
R304 100K
R309 100K
R301 820K
R302 100
R310 2K
R5 100K
R6 150
R3 10K
R4 6.8K
R8 100K
R9 4.7K
R7 1K
R1 120
R2 1K
C301 0.01
C302 0.033
C303 0.01
C304 0.1/50
C305 150P
C10 30P
C11 12P
C10 VXO
X1
C4 0.047F /5
C3 1000P
C7 0.01
C6 33/6.3
C5 33/10
C9 0.01
C8 10/16
C1 33/16
C2 3.3/50
L1 100
D1 RD9.1ES-T1B2
D25
D29
D35
D2
D3
D4
D5
D6
D7
D8
D9
D10
CP1
CP1 ICP-F10
TP1 GND
TP2
TP3 TEST
Q1
Q2
Q3
Q4
Q5
Q6
B1
IC 1 UPD75216ACW-188
Q4 2SC3311A(RS)
Q5 DTC124ES
Q3 DTC124ES
Q6 DTC124ES
IC 2 S-8053HNB
Q2 2SC3311A(RS)
Q1 2SD1863(QR)
D5 MTZ8.2B
D2 DA210S
D3 MTZJ4.7C
D4 MTZ8.2B

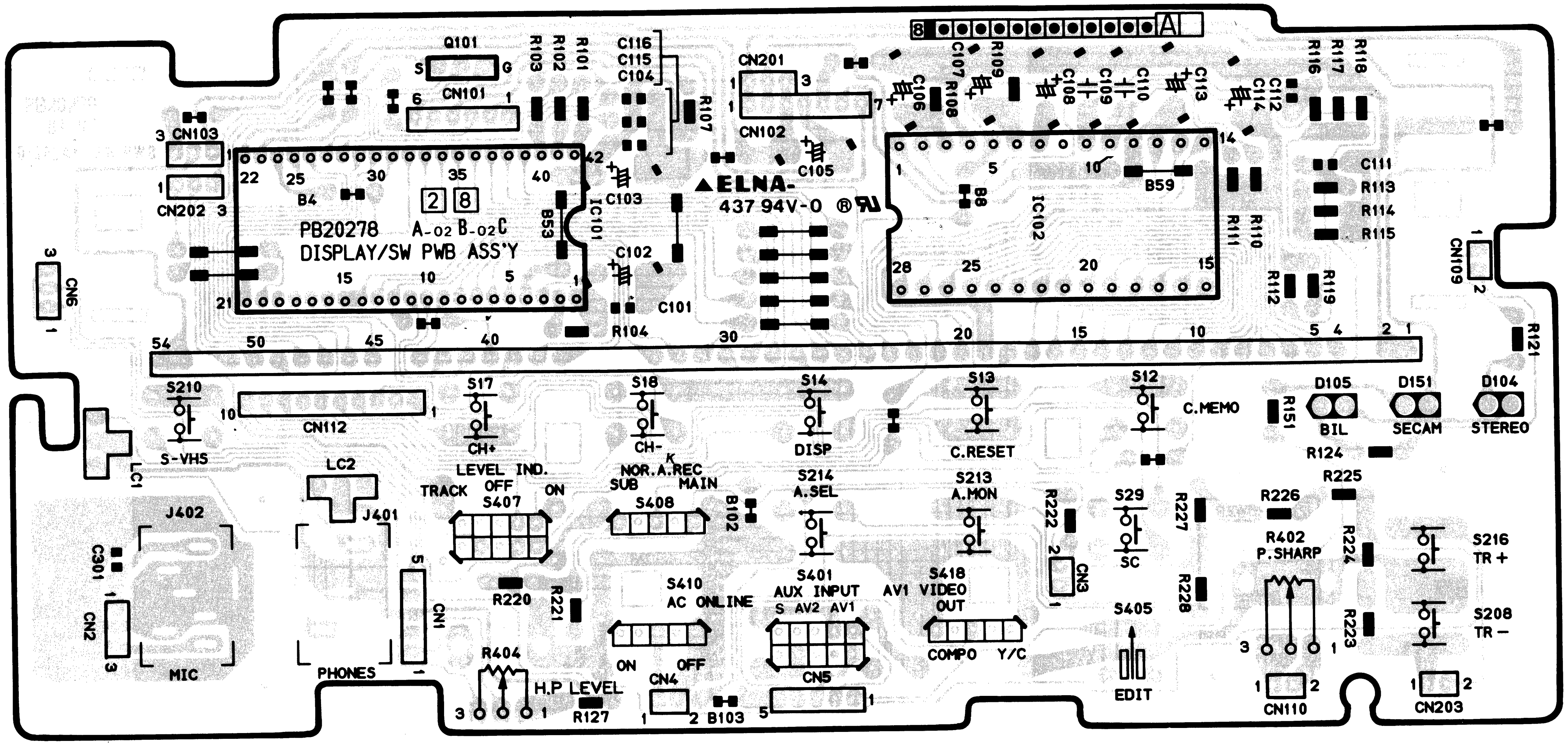
Note: Voltages are DC-measured with a digital voltmeter during stop and tuner mode.

Display/Schalter
Display/Switch

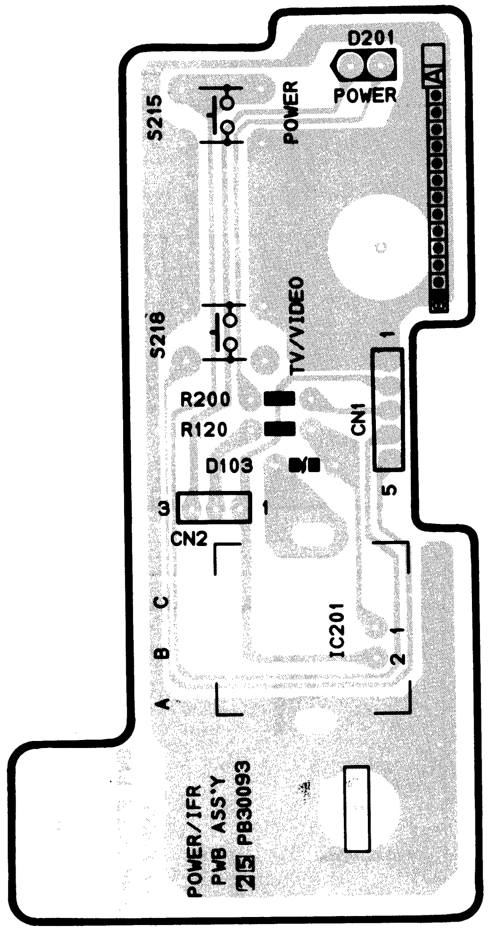

28 DISPLAY / SWITCH
IC 102
MSC1146BRS
IC102
FDP I
(VR6000)
FDP I
(A1200)
IC101
IC101
MSC7112-01SS
Q101
Q101
2SK658
SWD 5V
-30V(IND)
-30V
UNSW 5V
SWD 12V
AC 5V
45V
S407
LEVEL IND
TRACK
OFF
ON
R407
330
CN6
HI FI TRACKING
IND (L ch) IN
IND (R ch) IN
From/To 09
AUDIO
CN11
CN112
KS 3
KS 2
KS 1
KS 0
KS H
KS G
KS F
KS E
KS D
KS C
From/To 20
TIMER
CN4
S29
SIMUL
S17
CH(+)
S18
CH(-)
S13
RESET
S14
DISP
S12
C. MEMO
S214
AUDIO SEL
S213
AUDIO MONITOR
S210
S-VHS
S208
TRACK (-)
S216
TRACK (+)
CN203
OP 2
TRACK (+)
From/To 31
REC VR
CN1
S408
NOR AUDIO SEL
SUB
MAIN
CN3
BIL CTL IN
BIL CTL OUT
From/To 20
TIMER
CN11
S418
AV1/VIDEO OUT
Y/C
COMP
S401
AUX INPUT SEL
AV 1
AV 2
S
CN5
COMP
S
AV 1
EDIT ON
From/To 10
AV IN/OUT
CN 307
CN4
GND
AC ONLINE
From/To 02
REGULATOR
CN 4
PICTURE SHARPNESS
R402
10K(B)
CN110
SHARPNESS CTL
SHARPNESS MAX
From 05
VIDEO
CN 1
S405
EDIT
R404
H P LEVEL
CN1
H P LEVEL
AUDIO 11V
GND
H P IN (L ch)
H P IN (R ch)
From/To 09
AUDIO
CN 10
S410
AC ON LINE
J401
PHONES
L2 39
L1 (A1200)
39
CN109
STEREO LED
BIL LED
From 14
DEMODULATOR
CN4
D104
STEREO
D105
BILINGUAL
CN101
LOAD
S DATA
S CLK
UNSW 5V
REMOTE
45V
From/To 20
TIMER
CN 3
D104 SLH-34VR3F
D105 SLH-34MG3F
CN102
SWD 12V
SWD 5V
GND
-30V
GND (IND)
-30V (IND)
45V
From 02
REGULATOR
CN 6
CN201
SWD 12V
SWD 5V
GND
To 31
REC VR
CN 22
J402
MIC
C301
0.001
CN2
MIC CTL
GND
MIC OUT
From/To 10
AV IN/OUT
CN 2
From/To 31
REC VR
CN 21
CN202
REMOTE
ERASE LED
MARK LED
From 01
SWITCHING
POWER SUPPLY
CN2
CN103
AC 5V
AC 5V
GND

Note: Voltages are DC-measured with a digital voltmeter during stop and tuner mode.

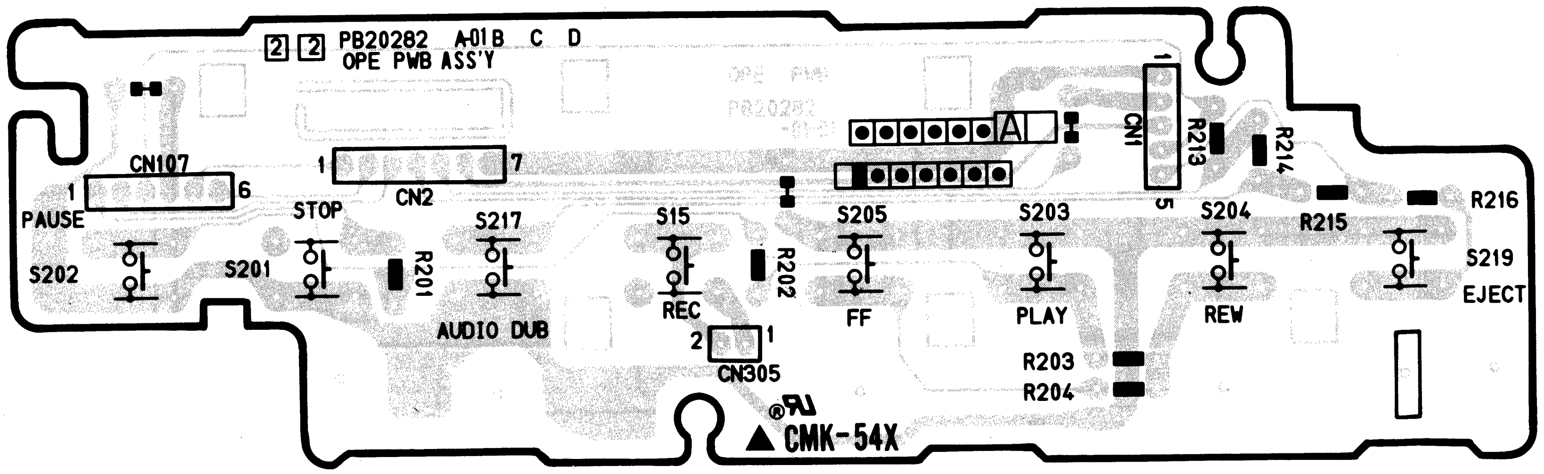
Display-/Schalterplatte
Display/switch board


Q101
R103
R102
R101
C116
C115
C104
CN201
CN101
R107
CN102
CN103
CN202
CN6
C105
C103
C102
C101
IC101
B53
B4
PB20278 A-02 B-02 C
DISPLAY/SW PWB ASS'Y
ELNA-
437 94V-0
R104
C107
R109
C106
R108
C108
C109
C110
C113
C114
C112
R116
R117
R118
IC102
B59
B8
R111
R110
C111
R113
R114
R115
R112
R119
CN109
R121
S210
S-VHS
CN112
S17
CH+
S18
CH-
S14
DISP
S13
C.RESET
S12
C.MEMO
R151
D105
BIL
D151
SECAM
D104
STEREO
R124
R225
LC1
LC2
J402
J401
C301
CN2
MIC
PHONES
CN1
LEVEL IND.
TRACK OFF ON
S407
NOR.A.REC
SUB MAIN
S408
B102
S214
A.SEL
S213
A.MON
R222
CN3
S29
SC
R227
R226
R402
P.SHARP
R224
S216
TR +
S208
TR −
R228
R223
R220
R221
S410
AC ONLINE
ON OFF
S401
AUX INPUT
S AV2 AV1
AV1
S418
VIDEO OUT
COMPO Y/C
S405
EDIT
R404
H.P LEVEL
R127
CN4
B103
CN5
CN110
CN203

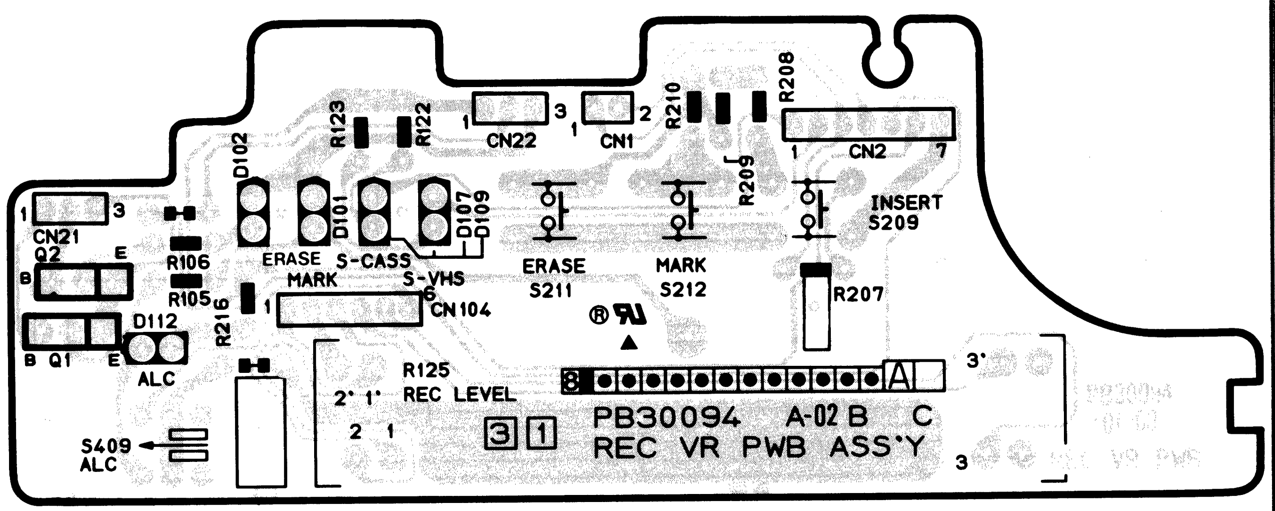
Ein/Aus und IR Platte
Power/IFR board


D201
POWER
S215
POWER
S216
TV/VIDEO
CN1
R200
R120
D103
CN2
IC201
POWER/IFR
PWB ASS'Y
25 PB30093

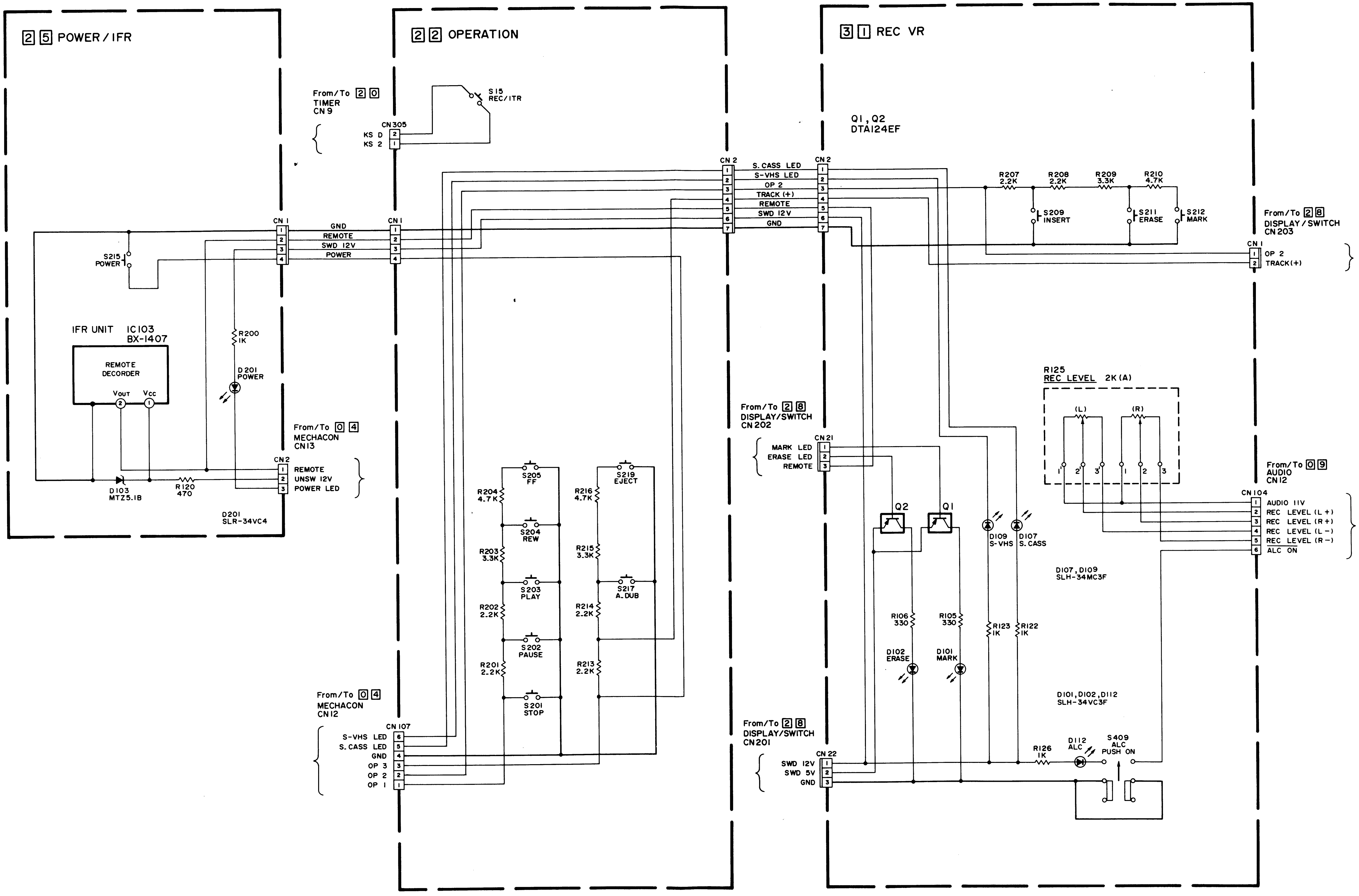
Bedienteilplatte
Operation board


22 PB20282 A-01 B C D
OPE PWB ASS'Y
CN107
PAUSE
S202
STOP
S201
CN2
R201
AUDIO DUB
S217
S15
REC
R202
CN305
S205
FF
S203
PLAY
R203
R204
CN1
R213
R214
S204
REW
R215
R216
S219
EJECT
CMK-54X

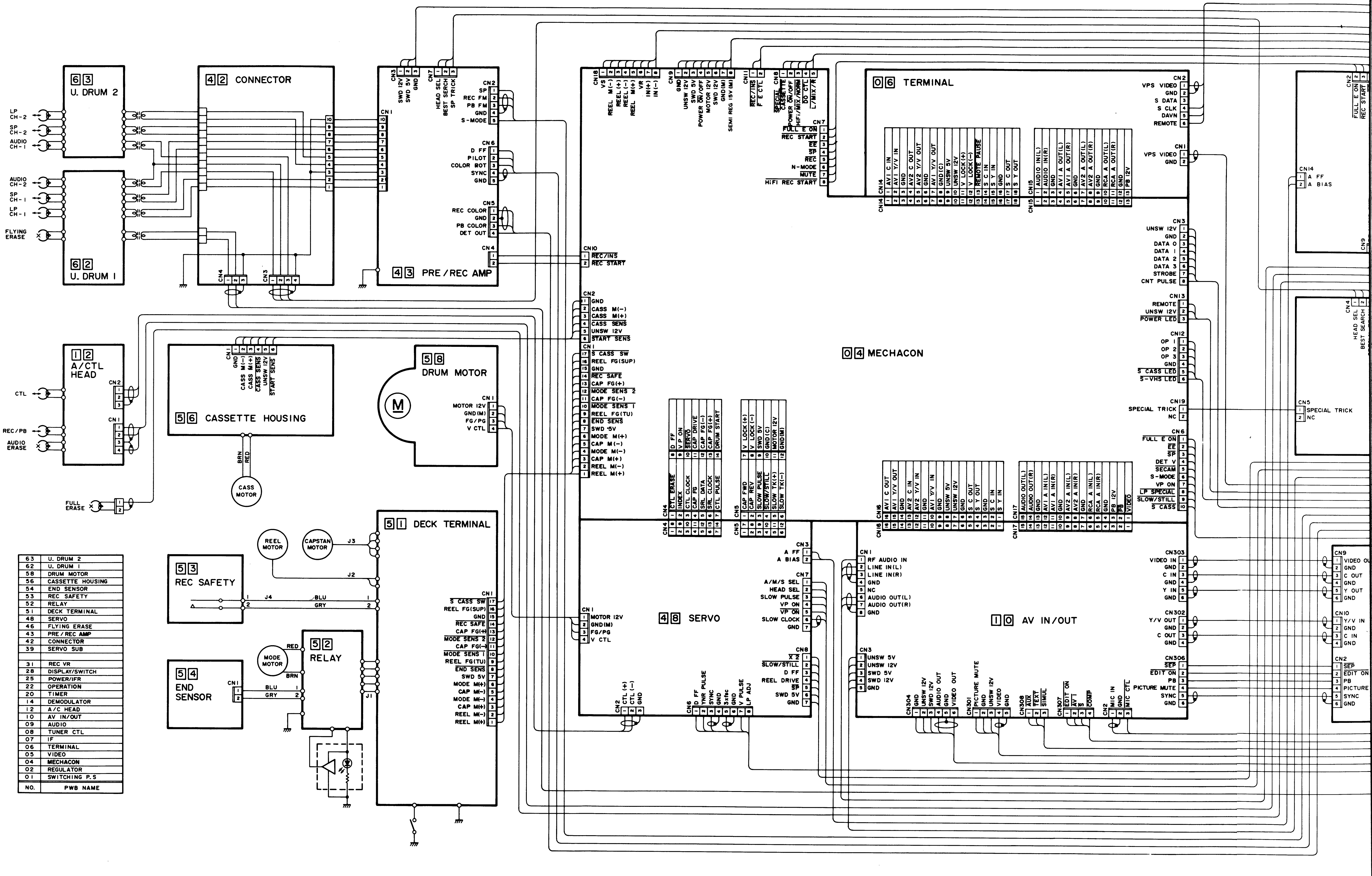
Aufnahmeeinstellerplatte
Rec VR board


D102
R123
R122
CN22
CN1
R210
R208
CN21
Q2
R106
R105
D101
D107
D109
ERASE S-CASS
MARK S-VHS
CN104
ERASE
S211
MARK
S212
R209
CN2
INSERT
S209
R207
Q1
D112
ALC
R216
R125
REC LEVEL
S409
ALC
PB30094 A-02 B C
31
REC VR PWB ASS'Y

Bedienteil, Aufnahmeeinsteller und Ein-/Aus Schalter
Operation, REC VR and Power/IFR

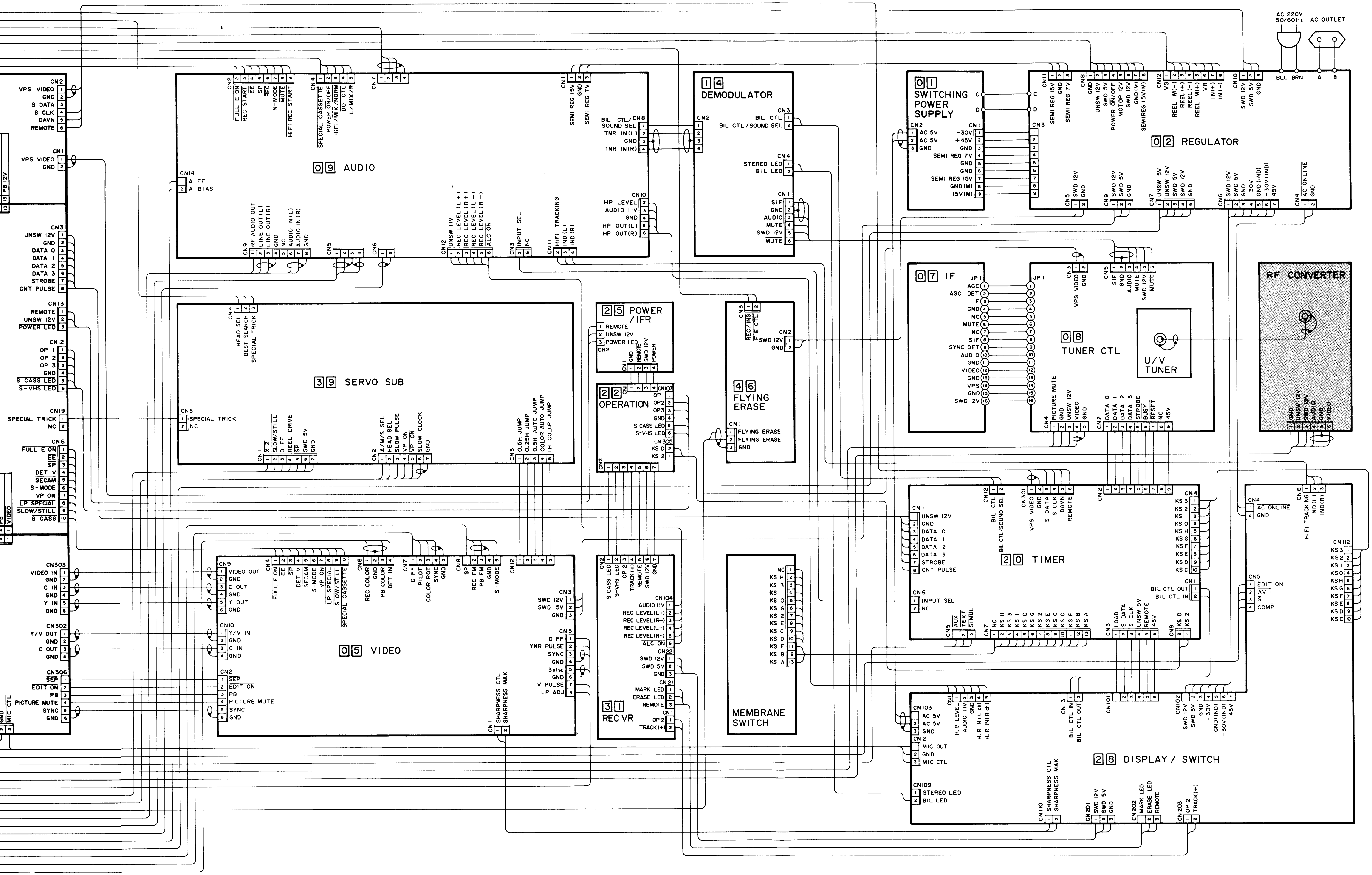

2 5 POWER / IFR
2 2 OPERATION
3 1 REC VR
From/To 2 0 TIMER CN9
CN305
KS D
KS 2
S15 REC/ITR
Q1, Q2 DTA124EF
CN2
S. CASS LED
S-VHS LED
OP 2
TRACK (+)
REMOTE
SWD 12V
GND
CN1
GND
REMOTE
SWD 12V
POWER
S215 POWER
R207 2.2K
R208 2.2K
R209 3.3K
R210 4.7K
S209 INSERT
S211 ERASE
S212 MARK
From/To 2 8 DISPLAY / SWITCH CN203
OP 2
TRACK(+)
IFR UNIT IC103 BX-1407
REMOTE DECORDER
VOUT
VCC
R200 1K
D201 POWER
From/To 0 4 MECHACON CN13
REMOTE
UNSW 12V
POWER LED
D103 MTZ5.1B
R120 470
D201 SLR-34VC4
R125 REC LEVEL 2K(A)
(L)
(R)
From/To 2 8 DISPLAY/SWITCH CN202
CN21
MARK LED
ERASE LED
REMOTE
Q2
Q1
D109 S-VHS
D107 S. CASS
From/To 0 9 AUDIO CN12
CN104
AUDIO 11V
REC LEVEL (L+)
REC LEVEL (R+)
REC LEVEL (L−)
REC LEVEL (R−)
ALC ON
D107, D109 SLH-34MC3F
S205 FF
S219 EJECT
R204 4.7K
R216 4.7K
S204 REW
R203 3.3K
R215 3.3K
S203 PLAY
S217 A. DUB
R202 2.2K
R214 2.2K
S202 PAUSE
R201 2.2K
R213 2.2K
S201 STOP
R106 330
R105 330
R123 1K
R122 1K
D102 ERASE
D101 MARK
D101, D102, D112 SLH-34VC3F
From/To 0 4 MECHACON CN12
CN107
S-VHS LED
S. CASS LED
GND
OP 3
OP 2
OP 1
From/To 2 8 DISPLAY/SWITCH CN201
CN22
SWD 12V
SWD 5V
GND
R126 1K
D112 ALC
S409 ALC PUSH ON

Verdrahtungsplan
Board interconnections



63 U. DRUM 2
62 U. DRUM 1
LP CH-2
SP CH-2
AUDIO CH-1
AUDIO CH-2
SP CH-1
LP CH-1
FLYING ERASE
42 CONNECTOR
CN4
CN3
43 PRE/REC AMP
CN1
CN3 SWD 12V SWD 5V GND
CN7 HEAD SEL BEST SERCH SP TRICK
CN2 SP REC FM PB FM GND S-MODE
CN6 D FF PILOT COLOR ROT SYNC GND
CN5 REC COLOR GND PB COLOR DET OUT
CN4
12 A/CTL HEAD
CTL
REC/PB
AUDIO ERASE
CN2
CN1
FULL ERASE
56 CASSETTE HOUSING
CN1 GND CASS M(-) CASS M(+) CASS SENS UNSW 12V START SENS
BRN RED
CASS MOTOR
58 DRUM MOTOR
CN1 MOTOR 12V GND(M) FG/PG V CTL
51 DECK TERMINAL
REEL MOTOR
CAPSTAN MOTOR
J3
J2
J1
53 REC SAFETY
J4
BLU
GRY
MODE MOTOR
52 RELAY
RED
BRN
54 END SENSOR
CN1
CN1 S CASS SW REEL FG(SUP) GND REC SAFE CAP FG(+) MODE SENS 2 CAP FG(-) MODE SENS 1 REEL FG(TU) END SENS SWD 5V MODE M(+) CAP M(-) MODE M(-) CAP M(+) REEL M(-) REEL M(+)
CN18 VS REEL M(-) REEL M(+) REEL (-) REEL M(+) VR IN(+) IN(-)
CN9 GND UNSW 12V SWD 5V POWER ON/OFF MOTOR 12V SWD 12V GND(M) SEMI REG 15V(M)
CN11 REC/INS F E CTL
CN8 SPECIAL CASSETTE POWER ON/OFF HiFi/MIX/NORM DO CTL L/MIX/R
CN7 FULL E ON REC START EE SP REC N-MODE MUTE HiFi REC START
CN10 REC/INS REC START
CN2 GND CASS M(-) CASS M(+) CASS SENS UNSW 12V START SENS
CN1 S CASS SW REEL FG(SUP) GND REC SAFE CAP FG(+) MODE SENS 2 CAP FG(-) MODE SENS 1 REEL FG(TU) END SENS SWD 5V MODE M(+) CAP M(-) MODE M(-) CAP M(+) REEL M(-) REEL M(+)
04 MECHACON
06 TERMINAL
CN2 VPS VIDEO GND S DATA S CLK DAVN REMOTE
CN1 VPS VIDEO GND
CN14 AV1 C IN AV1 Y/V IN GND AV2 C OUT AV2 Y/V OUT GND AV1 Y/V OUT GND(C) UNSW 12V V LOCK(+) V LOCK(-) REMOTE PAUSE S C IN S Y IN GND S C OUT S Y OUT
CN15 AUDIO IN(L) AUDIO IN(R) GND AV1 A OUT(L) AV1 A OUT(R) GND AV2 A OUT(L) AV2 A OUT(R) GND RCA A OUT(L) RCA A OUT(R) GND PB 12V
CN3 UNSW 12V GND DATA 0 DATA 1 DATA 2 DATA 3 STROBE CNT PULSE
CN13 REMOTE UNSW 12V POWER LED
CN12 OP 1 OP 2 OP 3 GND S CASS LED S-VHS LED
CN19 SPECIAL TRICK NC
CN6 FULL E ON EE SP DET V SECAM S-MODE VP ON LP SPECIAL SLOW/STILL S CASS
CN4 CTL ERASE INDEX CTL CLOCK CAP FG SRL DATA SRL CLOCK CTL PULSE D FF V P ON SERVO CAP DRIVE CAP FG(-) CAP FG(+) DRUM START
CN5 CAP FWD CAP REV SLOW PULSE SLOW/STILL SLOW TK(+) SLOW TK(-) V LOCK(+) V LOCK(-) SWD 5V GND(C) MOTOR 12V GND(M)
CN16 AV1 C OUT AV1 Y/V OUT GND AV2 C IN AV2 Y/V IN GND AV1 Y/V IN GND UNSW 5V UNSW 12V GND S C OUT S Y OUT GND S C IN S Y IN
CN17 AUDIO OUT(L) AUDIO OUT(R) GND AV1 A IN(L) AV1 A IN(R) GND AV2 A IN(L) AV2 A IN(R) GND RCA A IN(L) RCA A IN(R) GND PB 12V PB VIDEO
48 SERVO
CN1 MOTOR 12V GND(M) FG/PG V CTL
CN3 A FF A BIAS
CN7 A/M/S SEL HEAD SEL SLOW PULSE VP ON VP ON SLOW CLOCK GND
CN8 SLOW/STILL X 2 D FF REEL DRIVE SP SWD 5V GND
CN2 CTL(+) CTL(-) GND
CN6 D FF YNR PULSE SYNC GND 3.1fsc GND V PULSE LP ADJ
10 AV IN/OUT
CN1 RF AUDIO IN LINE IN(L) LINE IN(R) GND NC AUDIO OUT(L) AUDIO OUT(R) GND
CN3 UNSW 5V UNSW 12V SWD 5V SWD 12V GND
CN304 GND UNSW 12V SWD 12V AUDIO OUT GND VIDEO OUT
CN301 PICTURE MUTE GND UNSW 12V VIDEO GND
CN308 AUX TEXT SIMUL
CN307 EDIT ON AV1 S COMP
CN2 MIC IN GND MIC CTL
CN303 VIDEO IN GND C IN GND Y IN GND
CN302 Y/V OUT GND C OUT GND
CN306 SEP EDIT ON PB PICTURE MUTE SYNC GND
CN2 FULL E ON REC START
CN14 A FF A BIAS
CN4 HEAD SEL BEST SEARCH
CN5 SPECIAL TRICK NC
CN9 VIDEO OUT GND C OUT GND Y OUT GND
CN10 Y/V IN GND C IN GND
CN2 SEP EDIT ON PB PICTURE SYNC GND

NO.	PWB NAME
63	U. DRUM 2
62	U. DRUM 1
58	DRUM MOTOR
56	CASSETTE HOUSING
54	END SENSOR
53	REC SAFETY
52	RELAY
51	DECK TERMINAL
48	SERVO
46	FLYING ERASE
43	PRE / REC AMP
42	CONNECTOR
39	SERVO SUB
31	REC VR
28	DISPLAY/SWITCH
25	POWER/IFR
22	OPERATION
20	TIMER
14	DEMODULATOR
12	A/C HEAD
10	AV IN/OUT
09	AUDIO
08	TUNER CTL
07	IF
06	TERMINAL
05	VIDEO
04	MECHACON
02	REGULATOR
01	SWITCHING P.S


AC 220V 50/60Hz
AC OUTLET
BLU
BRN
A
B
09 AUDIO
14 DEMODULATOR
01 SWITCHING POWER SUPPLY
02 REGULATOR
39 SERVO SUB
25 POWER /IFR
22 OPERATION
46 FLYING ERASE
07 IF
08 TUNER CTL
U/V TUNER
RF CONVERTER
05 VIDEO
31 REC VR
MEMBRANE SWITCH
20 TIMER
28 DISPLAY / SWITCH
CN2
VPS VIDEO
GND
S DATA
S CLK
DAVN
REMOTE
CN1
CN3
UNSW 12V
DATA 0
DATA 1
DATA 2
DATA 3
STROBE
CNT PULSE
CN13
POWER LED
CN12
OP 1
OP 2
OP 3
S CASS LED
S-VHS LED
CN19
SPECIAL TRICK
NC
CN6
FULL E ON
EE
SP
DET V
SECAM
S-MODE
VP ON
LP SPECIAL
SLOW/STILL
S CASS
CN303
VIDEO IN
C IN
Y IN
CN302
Y/V OUT
C OUT
CN306
SEP
EDIT ON
PB
PICTURE MUTE
SYNC
MIC CTL
PB 12V
VIDEO
BIL CTL/SOUND SEL
TNR IN(L)
TNR IN(R)
SEMI REG 15V
SEMI REG 7V
HP LEVEL
AUDIO 11V
HP OUT(L)
HP OUT(R)
A FF
A BIAS
STEREO LED
BIL LED
SIF
AUDIO
MUTE
SWD 12V
AC 5V
-30V
+45V
GND(M)
15V(M)
HEAD SEL
BEST SEARCH
SPECIAL TRICK
REMOTE
POWER LED
FLYING ERASE
AGC
AGC DET
IF
SYNC DET
VPS
KS 3
KS 2
KS 1
KS 0
KS H
KS G
KS F
KS E
KS D
KS C
KS B
KS A
INPUT SEL
AC ONLINE
EDIT ON
AV 1
COMP
BIL CTL OUT
BIL CTL IN
H.P. LEVEL
MIC OUT
STEREO LED
SHARPNESS CTL
SHARPNESS MAX
MARK LED
ERASE LED
TRACK(+)